☆BF
1030
M11R29

UC SOUTHERN REGIONAL LIBRARY FACILITY

Engraved for Dr Renwick's Narrative of Miss Mc Avoy's Case, by E. Smith, 1817

A

NARRATIVE OF THE CASE

OF

MISS MARGARET M^{c}AVOY;

WITH

AN ACCOUNT

OF

SOME OPTICAL EXPERIMENTS

CONNECTED WITH IT.

By THOMAS RENWICK, M. D.

PHYSICIAN TO THE LIVERPOOL INFIRMARY.

AMICUS PLATO AMICUS SOCRATES, SED MAGIS AMICA VERITAS.——ARISTOT.

London:

PRINTED FOR BALDWIN, CRADOCK, AND JOY; UNDERWOOD AND BLACKS; AND J. CALLOW;
W. GRAPEL, LIVERPOOL; SOWLER, MANCHESTER; CONSTABLE AND CO. AND
W. BLACKWOOD, EDINBURGH; A. AND J. M. DUNCAN, GLASGOW;
AND CUMMING, DUBLIN.

1817.

Printed by Smith and Galway,
Liverpool.

* BF
1030
M4M29

TO

GILBERT MACLEOD, Esq.

GLOUCESTER PLACE,

London,

THESE PAGES ARE INSCRIBED, AS A SMALL TESTIMONY

OF

THE ESTEEM AND AFFECTION

OF HIS

SINCERE FRIEND,

THE AUTHOR.

Liverpool, 18th October, 1817.

PREFACE.

THE publication of the following narrative has been deferred partly on account of the frequent attacks of disease to which Miss M'Avoy has been liable even to the present time, but more particularly from the wish I had, that individuals who were sceptical upon the subject, should, by frequent examinations, ascertain the fact of deception, or the contrary. In an investigation of this nature, a cool and dispassionate judgement should be encouraged, and a hasty and prejudiced opinion avoided; but it is not easy to obtain this happy medium. I will not pay myself the compliment to say that I possess it, but I certainly did wish it to be possessed by those who doubted the powers ascribed to Miss M'Avoy. I am well aware that the deception which has been proved in the case of Ann Moore, as well as the detection of the reveries of Johanna Southcote, have made people cautious of

hazarding opinions upon cases of this extraordinary nature, which have not the sanction of repeated trials to confirm their truth.

The certainty of Miss M'Avoy's blindness having taken place on the 6th or 7th of June, 1816, was not disputed; but the moment when it was declared, that she was capable of distinguishing colours, reading, &c. it was determined she must of necessity see, as the possession of such a power could not be allowed so soon after the multitude had been convicted of incautious belief. Hence a difficulty has occurred in inducing individuals who were intitled to some rank in literary society to visit her. Their absence has been however amply supplied by the influx of visitors of all descriptions, many of whom have been possessed of at least equal attainments, and who believe that Miss M'Avoy does possess very extraordinary powers. Many of the circumstances attendant upon this case are of a very peculiar nature; but in several points the following examples are proofs, that occurrences something similar have taken place before. In those instances, where loss of vision has happened at an early period, a superior acuteness in touch, in smell, in taste, or in hearing, has often been dispensed by an all-wise Providence to those afflicted with blindness; and there are a few instances where similar effects have been produced at a much later period of life. In the case of James Mitchell, published by Mr. Wardrop in 1813, the preternatural acuteness his sense of touch, of smell, and of taste, had acquired, appeared to have supplied, in an astonishing manner, the deficiencies in the senses of seeing and hearing.

There is also on record a case somewhat analogous to this of Miss M'Avoy, in a lady who, when advanced in years, was seized with the confluent small pox, which deprived her of her sight, her hearing, and her speech. She was afflicted also with convulsions, which agitated her whole body, and produced such a stricture in the throat as prevented her from swallowing any kind of aliment, either solid or liquid, for nearly three quarters of a year. During this time she was supported in an uncommon manner. She chewed her food, turning it often, and keeping it long in her mouth, until at last she spat it out. She gargled her mouth with certain liquids for some time, and returned them in a similar manner as her food, no part having passed down the throat by any apparent act of deglutition: she must therefore have been supported by the proper vessels of the mouth absorbing a portion of the food, or possibly by a very small quantity trickling down along the gullet into the stomach.

During the privation of her sight and hearing, her touch and smell became so exquisite that she could distinguish the different colours of silk and flowers, and know when any stranger was in the room. After she became blind, and deaf, and dumb, it was not easy to contrive a method by which a question could be asked her and an answer received. This power was at last effected by talking with the fingers, at which she was uncommonly expert. But those who conversed with her in this manner were obliged to express themselves by touching her fingers instead of their own. This lady had a great antipathy to be seen by strangers,

and generally retired to her chamber, where none but those of the family were likely to come. An accident convinced her relatives that her power of smelling was acute and refined in an astonishing degree, and at least equal to the exquisite sensibility of her touch. The same relation who had been the means of discovering that she possessed the power of distinguishing colours, one day visited the family, went up to this lady's chamber, and entreated her to go down and sit with her amongst the rest of the family, assuring her that there was no other person present; to this she at last consented and went down to the parlour door; but the moment the door was opened, she turned back and retired to her own chamber much displeased, alleging that there were strangers in the room, and that an attempt had been made to deceive her. That strangers were present, was really the case, but the lady was not aware of it, they having come in while she was above stairs. When informed of the real state of the circumstance, she was pacified; and upon being asked afterwards how she knew there were strangers in the room, she answered by the smell. The difference between those with whom she was well acquainted and strangers was more readily distinguished than one acquaintance from another, and she seemed to require other assistance than the sense of smell. As a mean of making themselves known to her, they usually presented their hands, which she felt. The form and temperature of the hand produced generally the necessary distinction; but she sometimes was accustomed to span the wrist and measure the fingers. A lady with whom she was well acquainted, coming in one very hot day after having walked a mile, presented her hand as usual; she felt it longer than ordinary, and

seemed to doubt whose it was; but after spanning the wrist and measuring the fingers, she said it is Mrs. M. but she is warmer to-day than ever I felt her before. To amuse herself under these distressing circumstances, she used to work much at her needle, and it was remarked that her needle-work was extremely neat and exact. She used also sometimes to write, and her writing was yet more extraordinary than her needle-work. It was executed with regularity and exactness; the character was very pretty, the lines were even, and the letters placed at regular distances from each other. But the most astonishing particular with respect to her writing was, that she could by some means discover when a letter had been, from mistake, omitted, and she would place it over that part of the word, where it shoud have been inserted, with a caret under it. These circumstances were so very extraordinary, that it was long doubted whether she had not some faint remains both of hearing and sight, and many experiments were made to ascertain the matter; some of these she accidentally discovered, and the discovery always threw her into violent convulsions, so poignantly did she feel any suspicion of insincerity or deceit. Her family were at last perfectly convinced, from experiments and several accidental circumstances, that she was totally deaf and blind. Sir Hans Sloane, her physician, being still doubtful of the truth of the facts, which were scarce less than miraculous, was permitted to satisfy himself by such experiments and observations as he thought proper; the issue of which was that he pronounced her to be deaf and blind.*

* For a more detailed account of this case, *vide* Encyclopædia Brit. Article Blindness.

In confirmation of the extraordinary powers which are sometimes conferred upon the blind, I have transcribed an account of a French lady,* blind from her infancy, who could read, write, and play at cards, &c.

"A young gentlewoman of a good family in France, now in her 18th year, lost her sight when only two years old, her mother having been advised to lay some pigeon's blood on her eyes, to preserve them, in the small pox; whereas, so far from answering the end, it ate into them. Nature, however, may be said to have compensated for the unhappy mistake, by beauty of person, sweetness of temper, vivacity of genius, quickness of conception, and many talents which certainly must alleviate her misfortune.

"She plays at cards with the same readiness as others of the party; she first prepares the packs allotted to her, by pricking them in several parts, yet so imperceptibly that the closest inspection can scarce discern her indexes.† She sorts the suits, and arranges the cards in their proper sequence, with the same precision, and nearly the same facility, as they who have their sight. All she requires of those who play with her, is to name every card as it is played; and these she

---

* Mademoiselle de Salignac, born at Xaintonge.

† In this respect she is equalled, if not excelled, by Mr. Stanley, organist of St. Andrew's, Holborn, who, though blind almost from his birth, plays at whist as well as most men.

retains so exactly, that she frequently performs some notable strokes, such as shew a great combination and strong memory.*

"The most wonderful circumstance is, that she should have learned to read and write; but even this is readily believed on knowing her method. In writing to her, no ink is used, but the letters are pricked down on the paper, and by the delicacy of her touch, feeling each letter, she follows them successively, and reads every word with her finger's ends.† She herself, in writing, makes use of a pencil, as she could not know when her pen was dry; her guide on the paper is a small thin ruler, and of the breadth of her writing. On finishing a letter she wets it, so as to fix the traces of her pencil, that they may

---

* The reader may observe, from this account, that the French lady has nothing to boast of, in which she is not excelled by the gentleman already mentioned, except reading and writing. The works peculiar to her sex are gained mechanically; but the distinguishing colours, telling the precise time by a watch, naming the notes in music, and many other things depending upon the ear and touch, are so familiar to Mr. Stanley, that his friends cease to think them extraordinary in him. His naming the number of persons in a room, on entering it; his directing his voice to each person in particular, even to strangers, when they have once spoken; his missing any person absent; his telling who that person is; his conceptions of youth, beauty, symmetry, and shape, are such wonderful attainments as are, perhaps, all peculiar to himself, with which nothing that is reported of the French lady can be brought in competition.——*See Annual Register, Vol. LXII. page* 648, *article Natural History.*

† Cardinal Albani, although quite blind, had acquired, by the exquisite delicacy of his touch, and the combining powers of his mind, such a sense of ancient beauty, that he excelled all the virtuosi of his time, in Rome, in the correctness of his knowledge of the verity and peculiarities of the smallest medals and intaglios.——*Vide Galt's Life of West, page* 103.

not be obscured or effaced; then proceeds to fold and seal it, and write the direction, all by her own address and without the assistance of any other person. Her writing is very straight, well cut, and the spelling no less correct. To reach this singular mechanism, the indefatigable cares of her affectionate mother were long employed, who accustomed her daughter to feel letters cut in cards or pasteboard, brought her to distinguish an *a* from a *b*, and thus the whole alphabet, and afterwards to spell words; then, by the remembrance of the shape of the letters, to delineate them on paper; and lastly, to arrange them so as to form words and sentences. She has learned to play on the guitar, and has even contrived a way of pricking down the tunes as an assistance to her memory. So delicate are her organs, that in singing a tune, though new to her, she is able to name the notes. In figured dances, she acquits herself extremely well, and in a minuet, with inimitable ease and gracefulness. As for the works of her sex she has a masterly hand; she sews and hems perfectly well; and in all her works she threads the needles for herself, however small. By the watch, her touch never fails telling her exactly the hour and minute."*

If I were to give an equally detailed account of other blind persons, whose particular talents were brought forth to public view, I should swell these pages into a large volume. It will be sufficient, however, to

* The late Mr. William Graham, of Dumfrieshire, played at whist very well. He pricked the cards with a fine needle as quickly as you could give them to him, and he scarcely ever made a mistake. I think he must have distinguished the colour of the cards. He had been a pupil of the Blind Asylum, and was expert in several branches of manufacture.

name Mrs. Walkeir of Geneva, as reported by Bishop Burnet, Mr. Stanley, Dr. Blacklock, Dr. Moyse, Mr. Gough of Kendal, Mr. Cheese of Manchester, Mr. Casson of Liverpool, as instances in which the powers of the mind were given, under the misfortune of blindness, to the attainment of philosophical science, classical erudition, polite literature, or a scientific knowledge of music. These instances will be sufficient to prove that blind people have the power of becoming very useful and valuable members of society, if their abilities be directed to the proper point. It will show the importance of inquiring minutely into the nature of the abilities each blind person may possess, and of encouraging them to prosecute the improvement of any particular talent to its utmost extent. Indeed when blindness becomes the misfortune of the poor and wretched, what can be more conciliating to their feelings than the attention of the rich, in affording them the common comforts of life; and who, by placing them in a situation to learn different employments, to become conversant in music, &c. and to obtain an honourable and comfortable independence, will be amply repaid by the gratification it will afford them, in observing the efforts they have made in their behalf crowned with the wished-for success.

In the hope that the friends of Miss M'Avoy some time hence may permit the visits of respectable individuals to examine more fully into the nature of this power she is supposed to possess, and to ascertain, by such experiments as they may think proper, the truth of the following statement, I will take the liberty of proposing the mode which appears to

me the most likely to attain this object in a very perfect manner. The present state of Miss M'Avoy's health is so precarious, that there can be no certainty of the disease being completely subdued in any reasonable time ; yet I hope, as there is just now a considerable amendment in many of the symptoms, that it may be continued, so as ultimately to restore her to health. The nature of the disease renders the nervous fibre extremely irritable, and great caution is requisite not to agitate and alarm her by any suspicions of her incapacity to do what she professes, and to show no doubt of her possessing the power during the time of examination ; nor to express these doubts afterwards, if they mean to make other trials, lest they should be related to her again by persons who are imprudently officious. Experimentalists, who have only the investigation of truth in view, will use every delicacy in their examination towards a female so unfortunately situated as to health, and they will endeavour, by polite attention and quiet manners, to conciliate her regard. By this means, any fear she might have had of being subjected to unpleasant measures, in blindfolding her, would be avoided ; or if they did occur in a few of the first trials, they would at last be done away with ; and I think she will then readily convince them there is no imposition practised. In the course of the narrative, the different modes of blindfolding her are detailed, and I should recommend them to be tried in the first instance, because, having been those to which she has been accustomed, she will have less anxiety about the result. I have always found it preferable to determine upon one plan at once, and never to change it on the day of trial, if I could

avoid it. For instance, if the handkerchief be used, let the person first try it upon himself, and then if he thinks he is blindfolded, let him try it in a similar manner upon Miss M'Avoy. On the next day let the gogglers be used, after they have been tried upon himself, and so on with the gold beater's skin, as described in the course of the narrative. When he has ascertained whether she possesses the powers ascribed to her, he may commence any new trial. He is now become so much acquainted with Miss M'Avoy, and she with him, that her fears will be done away with, and he may make the experiments by closing down the eyelids with his own fingers, whilst an assistant presents the silk, the watch, the book, or any thing he may wish her to describe; or he may give her a colour behind her, or in such a situation sideways as would render it impossible for her to see the colour presented, even if she had perfect vision. He might then try her with a sheet of paper, pasteboard, or any other substance he may chuse, held at different distances between her mouth and her lap, that he may know at what distance the breathing seems to have any influence, or whether the obstruction is evident to her when within a few inches of it, *i. e.* at the distance where she reads through the plain or the magnifying glass. If the gold beater's skin be made use of, it is chiefly necessary that the eyelid should be closed down, and the gold beater's skin sewed with as fine sewing silk or thread as can be obtained, upon muslin or Persian silk. The size should be equal to the globe of the eye, and ought to press a little farther than upon the lower orbit of the eye. When wetted with water, or applied after the outward part of the eye has been wetted with a sponge wrung out of water, it is to be neatly fitted

over the eyeball, &c. and held there with a soft handkerchief until it adhere. The same is to be done with the other eye. The gold beater's skin, covered by a piece of cotton velvet or black cloth, so large that it may nearly reach the eyebrow, above the nose on one side, the upper part of the cheek bone on the other, and below, is then to be applied and pressed with the handkerchief until it be perfectly dry. A silk handkerchief tied over the whole when they are moist, will occasion the pieces to adhere firmly, and when taken off separately, which can with great care sometimes be done, the lower covering as well as the upper is observed to adhere so closely that the skin of all the parts appear to be drawn out upon taking the covering off. The gold beater's skin must always be renewed after each trial. I have tried once a tin box with a funnel, similar to that in which tea is passed into bags at the tea dealers. From the end of the funnel, which was soldered into the box, issued two small pipes into each side of the box. The sides of the box were so open as to admit a hand on each side. Two wafers were said to be told when I first sent the machine up to her, but she named no colours to me. When the hands were placed in the box, there must have been a slight degree of light, but there appeared to be a reflection from the tin which caused an unpleasant feeling to Miss M'Avoy. I tore off the funnel, and the pipes were so small, that if Miss M'Avoy had blown into them, I doubt if the breath would have been felt upon the hands. This, however, may be tried again, or Dr. Trail's box, which is not dissimilar to this, and being to be made of wood, may have fewer objections than the tin. Mr. Martin's plan is to affix a piece of board in such a way to her nose and mouth, that

they may be perfectly free to communicate with the object before her, but that the eyes should be so placed as to have no chance of seeing, if they were possessed of vision.

The only objection I have to machines of this kind is, first, that they convey a doubt that the former trials have not been sufficient, and, of course, that she is suspected of imposition. This idea conveyed to her occasions agitation, always diminishes, and often destroys the power. Secondly, if means can be found to blindfold her, which shall not convey unpleasant sensations to her feelings, why may we not be content with them, as a multiplicity of apparatus cannot be necessary to produce conviction to the mind of the most sceptical? and, thirdly, if surgeons, oculists, and medical men believe the optic nerve to be so injured by the compression of the brain, that the sight is in this case completely destroyed, why should other persons, who have not examined so minutely the diseased appearance of the eyes, deny the assertions of respectable men, and still assert Miss M'Avoy can see? I believe, however, from what I have seen in attending these examinations, that whatever new plan were tried and succeeded in, would only be good for the time, and another would be proposed, and so on, until the patience of the observer, of the person upon whom the experiments were made, and, finally, of those who were so repeatedly renewing their experiments, was completely exhausted. The optical phenomena connected with this case are extraordinary, and exceed, in many material points, all the cases I have seen detailed.

From the various experiments I have made upon the eyes themselves, I am perfectly convinced the retina receives no impression from any ray of light falling upon it. The experiments made by Mr. Brandreth and me before, and more particularly on the 29th of September, in the presence of Dr. Mackenzie, a physician to the forces, and a gentleman, I am informed, who was upon the medical staff of Lord Wellington, plainly show very great derangement in them; and the nature of the previous illness, which in a certain degree still continues, would lead us to suppose, that though the more material compression of the brain be relieved by the discharge of fluid from the brain, yet that there was still some obstruction to the due performance of all its functions, or of the nerves connected with it. If Miss M'Avoy should hereafter recover her health, I shall feel much pleasure; and if, along with the restoration of her health, she should regain her sight also, of which I have no hope, it will still be a higher satisfaction to me. Opinions upon a case of this kind should be given with openness and candour, and they ought to be founded upon actual observation of the state of the eyes; but if this examination be not esteemed satisfactory, other experiments should be made to ascertain the fact of blindness, or the contrary.

I have generally related only what I have observed myself in the detail of the succeeding narrative; but I am informed many other individuals have visited her, and have made their own observations upon the nature of this extraordinary power. The Rev. Thomas

Glover has been kind enough to transmit to me a copy of the experiments he made from the 30th of July to the 3d of August, which is inserted in the narrative. I was present during the trial of most of the experiments on the 2d of August, and can testify to the truth of them. I might observe also, that Mr. Thomas Glover came to Liverpool as completely sceptical as any other individual, but went away particularly satisfied that the reports he had heard of Miss M'Avoy were founded in truth.

I shall now conclude these prefatory observations, and shall submit the whole to the public, with the hope that they will endeavour to satisfy themselves of the truth of the statement, by a personal examination of Miss M'Avoy.

REFERENCE TO THE PLATE.

A A the edges, encircled with cotton wool inside and out.

B B the strings which cross under the nose, and are tied at the back of the head.

C the strings tied under the chin.

ERRATA.

Page 44, line 20, for *ribband* read *riband*.

49, 20, for *aromet* read *aromat*.

53, 5, for *stripes* read *strips*.

54, 23, for *ribband* read *riband*.

60, 1, for *evening* read *night*.

61, 19, after *blue* dele , and insert it after *purple*.

82, 6, for *upon* read *near*.

63, 9, for *plain* read *plane*.

88, 1, for *Captain Hornby, of the Navy*, read *the Rev. George Hornby*.

— 27, for *Captain Hornby* read *Mr. George Hornby*.

89, 3, for *Captain* read *Mr. George*.

— 8, for *Captain* read *Mr. George*.

108, 6, after *belladonna* read *however*.

8, 12, of the Appendix, for *even* read *ever*.

Preface, page	vi,	line 1,	for *extraordinany* read *extraordinary.*
	ix,	12,	for *shoud* read *should.*
	xiii,	2,	for *Dr. Moyse* read *Dr. Moyes.*
	xix,	4,	for *2d August* read *1st August.*
Narrative,	23,	2,	foot note, insert *;* after *distinctly.*
	94,	6,	after *riband* dele *of her hat.*

NARRATIVE.

The subject of the following case was born on the 28th June, 1800. From her birth to nine months old, I am informed, she was a healthy child, and able then to walk alone; but during the following nine months was often indisposed. Her complaints increased, and at last were of so serious a nature, that her death was looked upon as inevitable, by her friends and medical attendants. This opinion was fortunately premature, as she was suddenly relieved by a discharge of a thick matter from the ear and nostrils. A change of air being advised, her friends removed her into the country, where a residence of seventeen weeks re-established her health. Upon her return she was attacked with scarlet fever, and afterwards with hooping cough, which continued for six months, with so much violence as to cause blood to be discharged from the eyes, nose, and ears. The hooping cough was succeeded by an affection of the eyes, which severely afflicted her, and was attended with a very considerable and constant discharge of a bloody watery fluid. Her friends despaired of saving the eyes, but no professional man was employed. The applications made use of were of the most simple kind, such

as brandy diluted with water, bread and water poultices, rose water, conserve of roses, and, once, blisters behind the ears. These remedies produced no material benefit; the disease gradually increased, and the exposure to light caused insupportable pain. When the eye-lids were raised up, the eye-balls appeared as one mass of blood. A friend recommended Johnston's Golden Ointment, which was made use of with great benefit, and in a very short time the pain and irritability of the eyes were entirely removed. She now gradually recovered her sight; perfectly with the right eye; but the left was so weak she could scarcely open it, and saw every thing as it were through a mist. In appearance she continued delicate; but her appetite was good, nor could she be said to be unhealthy, until the month of October, 1814. About this period she caught a violent cold, attended with cough, loss of appetite, and great debility. Worm powders, senna tea, and tincture of rhubarb were given at different times, from which she ultimately received relief. In February 1815, the thighs became œdematous, and the body was swollen to a considerable degree. She was troubled with cough, flatulence, and pain at the stomach: glandular tumours, some of them as large as a pigeon's egg, were observed in the groin and belly. Having never menstruated, her mother supposed the unpleasant symptoms she laboured under might be occasioned by the absence of this necessary evacuation. Mr. Taylor, an irregular practitioner, was consulted, and recommended her to take a decoction of herbs, composed of horehound, mountain sage, penny royal, and southernwood, and to use friction with the hand and oil, from which she did not derive any benefit. As Miss M'Avoy gained no ground from Mr. Taylor's prescription, her friends applied to the Rev. Mr. Craythorne, of Garswood, in this county, a gentleman who prescribes and dispenses medicines in that neighbourhood, and once a month in Liverpool, with credit to himself, and reputed utility to others. He ordered the limbs to be rubbed with a warm

hand, and gave her pectoral and chalybeate medicines, which, in about a week relieved her. She soon after menstruated, and continued to be regular until March 1816. By a perseverance in the use of the medicines, and dry friction, the swelling of the legs, thighs, and body, gradually disappeared, and for the space of two months her health was very much improved. The confinement occasioned by an assiduous attendance upon her brother during a tedious illness, affected her health, and she became greatly debilitated. After her brother's death, in August 1815, she persevered, although very complaining, in going to school, until the end of September, when a glandular swelling took place under the right jaw, accompanied with very great pain of the head, which prevented her from reading, sewing, or even threading a needle. At last she was obliged to leave school, and remained at home three weeks, growing worse every day.

In November it was thought adviseable to send her into the country. As her residence was only at the distance of two miles, she occasionally came to town. At first her health appeared to be improved; but afterwards she became worse, and in November 1815, was much indisposed. Her complaints continued to increase till the latter end of April, when the Rev. Mr. Craythorne was again applied to for assistance. The medicines he gave her were similar to those used before, but they did not produce a similar good effect.

On the evening of the 4th June I received a message to visit Miss M'Avoy early on the next morning.

June 5th, I obtained the following account of Miss M'Avoy's state of health. She had taken little or no solid food for the last three weeks; coffee

and a little milk had been her principal diet; the bowels were habitually costive; the urine in small quantities, and of a dark colour, resembling coffee grounds; the pulse small, frequent, irregular, and sometimes intermitting. It varied from 84 to 140 pulsations in a minute during my visit. There had been no appearance of menstrual discharge for three months. She was troubled with a tickling cough, pain in the right side, tightness in the chest, difficulty of breathing, and occasional palpitation of the heart, increased materially upon any exertion, or by any sudden noise or alarm. She complained of violent pain in the fore and back part of the head, with a throbbing and beating sensation. The vessels of the tunica conjunctiva were filled with red blood, but she suffered very little uneasiness from the action of light. The abdomen was so peculiarly tense and incompressible, that I could not ascertain whether the liver or any other of the abdominal viscera were affected with disease. I did imagine, however, upon repeated percussion with the hand, that I felt the slightest fluctuation. The feet, legs, and thighs had been for some time œdematous; but a few days before I saw her, the swelling had suddenly disappeared. She was so much affected with giddiness, as to stagger in walking across the room. With the left eye she could scarcely distinguish any object, and with the right, for several days previous to my visit, every object at a distance appeared white, and those which were near, double. The firing of the guns at the Fort, on the 4th of June, in commemoration of the birth of his Majesty, was the cause to which she attributed the increase of headach, of the palpitation of the heart, and of the general symptoms of her disorder. The great debility she seemed to labour under, the suspicion that fluid was already collected in the ventricles, or between the meninges of the brain, and the passive nature of the suffusion of blood in the tunica conjunctiva, deterred me from the free use of the lancet. I recommended, however, the following medicines, blisters behind the ears, and

eight leeches to be applied to the temples, and that they should be allowed to bleed freely :—

℞. Magnesiæ, ʒ j.
Pulv. Fol. Digital. gr. iij.
—— Rad. Ipecac. gr. viij.
M. et divide in chartas xii. Capiat j. 4ta q. q. hora.

℞. Pulv. Rad. Scillæ, ℈ j.
Hydrarg. Submur. ℥ ss.
Conserv. Rosæ q. s. ut fiat Massa in Pil. xx dividenda. Capt. ij. nocte maneque.

June 7th.—Being absent from town, I was not able to see Miss M'Avoy yesterday. My friend Mr. Thomas, the usual medical attendant of the family, informed me he had been sent for on the evening of the 5th June, in consequence of Miss M'Avoy fainting very soon after the leeches were applied. They were immediately taken off, and only a small quantity of blood was obtained. She could not distinguish any object whatever. This morning she appears totally blind. The pupils are considerably dilated, and do not contract upon the application of strong light; the pain of the head is very acute; the body costive; pulse 120, feeble and irregular; the other symptoms are much the same as on the 5th. Only two of the powders and four of the pills have been taken.

℞. Hydrarg. Submuriat. gr. v.
Pulv. Rad. Jalapæ, gr. xv.
M. ut fiat Pulvis hora somni sumendus.
Frica in latus dextrum quaque nocte Ungt. Hydrarg. ℥ j.

June 8th.—The powder produced two small motions: the pain of the right

side is very acute, and it was so sore to the touch, that she could not bear the friction of the mercurial ointment. Complains of the pain in the head being very severe, and of a tremulous motion in her limbs. Pulse feeble and irregular, varying from 96 to 120.

Repr. Pulvis Cathartieus hora somni sumendus.

R. Infus. Sennæ C. ℥ xii.

Magnes. Sulphatis, ℥ ij.

M. sumat cochl. iv. 2da quaque hora donec sit alvus bene soluta.

Appr. cervici Empl. Lyttæ ampl.

June 9th.—The blister rose well, and discharged freely. The bowels were only slightly opened with the cathartic powder and mixture. About ten o'clock in the morning she was suddenly seized with convulsions. Her mother attributed their coming on to the tolling of St. Paul's church prayer bell. In the course of the day she became paralytic on the right side.

Abradatur capillitium et Appr. Empl. Lyttæ ampliss. capiti superiori.

Repr. Pulvis Cathartieus h. s. s.

Repr. Mist. Cathartic coch. iv. cras mane et 2da. quaque hora si sit occasio ad alvum solvendam.

June 10th.—The blister was not applied, from the impossibility of shaving the head during the convulsions, which continued with scarcely any intermission. When the convulsions did cease, the breathing was sometimes suspended for so long a period, that her friends thought she had entirely ceased to breathe. Mr. Thomas and I observed this suspension, which continued more than ninety seconds, from the end of one expiration to the beginning of the succeeding inspiration. The bowels are costive: she complains, when able to express her feelings, of numbness in the fore part of the head.

Appr. Empl. Lyttæ capiti.

Repr. Pulv. et Mist. Cathartic.

June 11th.—The blister rose well. The convulsions still continue. When she is able to speak, she complains of violent pain in the head, occasional palpitation and oppression about the region of the heart. She has taken little or no food except strong coffee, with a little milk: of this beverage she drinks daily from twelve to twenty cups, without producing any unpleasant effect. The body is still costive. Pulse 120 to 140.

Repr. Pulvis Cathartic. et Mistura.

Frica in latus dextrum Ungt. Hydrargyri, ℥ j.

Injice vespere, si sit occasio, Enema Domesticum.

June 12th.—The bowels were slightly affected by the purgatives. The injection was not administered. The ointment had not been used. Pulse 120 to 140, feeble and irregular. She appears very much exhausted, and from the present symptoms, there is little probability of her surviving the night.

Appr. Sinapismi pedibus.

June 13th.—At eight o'clock A. M. Mr. Hughes, the stepfather of Miss M'Avoy, called upon, and agreeably surprised me, by saying Miss M'Avoy was not only alive, but very much relieved, and quite sensible. A most unexpected change had taken place. About three o'clock yesterday afternoon, Miss M'Avoy was observed to gasp for breath, and complained of a sense of suffocation from something passing down her throat; that it was very offensive in taste and smell. She was so much debilitated as not to have the power of spitting it out. Her friends were obliged to remain with her during the night, to raise her up as often as the fluid was passing down. No part of the fluid was obtained during the first four days, although a considerable quantity passed down, and was occasionally thrown up from the stomach.

On the 15th, about seven ounces were caught in a basin at two efforts to expel it. A part of this fluid was sent to Doctor Bostock, a gentleman well known for his ardour and accuracy in chemical investigation, that he might examine it; and I am obliged to him for the following account.

"The fluid was three ounces and five drachms in quantity; it was somewhat opake and muddy, of a light brown colour, and had some flakes or masses of a denser consistence floating in it.* These flakes very slowly subsided, and the more fluid part being poured off, appeared to be homogeneous, and was of the specific gravity of 1.014. The fluid was subjected to a variety of tests, by which it was found to be of that kind which has been denominated albuminous, in every respect resembling the fluid which is effused in ascites and in various species of dropsy. It differs from the fluid that is found in the ventricles of the brain in hydrocephalus, by containing a larger quantity of animal matter; but at the same time its solid contents were less than those of the serum of the blood. The masses that were floating in the fluid, after being drained from it as much as possible, were found to consist of a half solid matter, which agreed in its properties with the mucous fluid which is occasionally expelled from the lungs or fauces, and it may be presumed were accidentally mixed with the fluid in its passage through the nose or mouth. These remarks will, I apprehend, be sufficient to prove that the fluid in question differs essentially, both from that which is produced in

* It might be mentioned, that Mr. Thomas had immersed the bottle containing the fluid in water, which had recently been boiled, and a copious cream-coloured precipitate had fallen down, which might be the flakes mentioned by Dr. Bostock, but which were supposed to be albuminous. In the hope of obtaining more of the fluid that was fresh, Dr. Bostock did not receive it until it had been kept a considerable time.

hydrocephalus, or from what is secreted from the mucous membrane; and so far as we can judge of its origin by its nature, we must conclude it to have been a proper dropsical fluid, effused from a serous membrane, such as that which lines the close cavities that have no communication with the atmosphere."

The convulsions in a great measure ceased from the time of the discharge taking place, but the beating, complained of in the back part of the head, did not entirely subside until the 17th instant, and was then succeeded by violent pain and soreness over the whole body, so that she could scarcely bear the slightest touch. The top of the head, which had little or no sense of feeling before, after this discharge became peculiarly sensible. In attempting to get up, it was observed that, in putting the right foot upon the floor, a sudden and irresistible contraction of the leg and foot, towards the ham, took place; and if the right hand were pressed upon the bed or chair, a similar effect was produced, and it was suddenly retracted towards the elbow and shoulder. Her hearing before, and indeed from childhood, had been very deficient, but after the discharge took place, it became peculiarly acute.

June 18th.—Our patient still continues convalescent. The appetite is much improved, but she indulges rather too freely in taking food. The friction with the Ungt. Hydrarg. was recommended to be used until the mouth became affected. The cathartic powders were repeated at night, and the mixture in the day, as occasion might require, to open the bowels.

June 20th.—The bowels are still costive: she complains of pain in the head,

and a sense of fulness at the stomach. This, however, might be accounted for from having eaten a large quantity of new potatoes.

R. Hydrargyri Submuriatis, gr. vj.
Pulveris Rad. Jalapæ, gr. xxv.
Confect. Rosæ Gal. q. s. ut fiant Pilulæ vi. hora somni sumendæ.

June 21st.—The pills have not operated. The other symptoms are much the same.

Repr. Mist. Cathartic.

June 22d.—The mixture operated well. The pain of the head and fulness of the stomach are much relieved. Her appetite is much better.

Repr. Mist. Cathartic, si sit occasio, ad alvum solvendam.

June 26th.—Complains of difficulty in making water. In other respects she improves daily.

R. Aquæ Cinnamomi, ℥ vii. ss.
Spirt. Æther. Nitric. ℥ iij.
Spirt. Lavandulæ, C. ℥ j. M. sumat; coch. ij. 4ta. quaque hora, si urgeat dysuria.

June 28th.—She has passed urine freely, and of a good colour. The bowels are more regular, and she is much better in every respect. The peculiar sensibility of the hand and foot, upon any sudden pressure, is entirely gone off. The right hand and arm had recovered their feeling in a certain degree, and Mrs. Hughes gave her a stocking to knit, which occupied her attention, and took off, in some degree, a sense of numbness she had before complained of.

July 1st.—I was desired to visit Miss M'Avoy this morning. She complains

of faintishness; pain and beating in the head; want of appetite; body costive; pulse variable and feeble, from 108 to 120 pulsations in the minute. She feels considerable pain in the left breast, and at times her mother has observed her breast to heave up and down, as she expresses it, like a bellows.

℞. Aquæ Menthæ pip. ℥ vi. ss.
Tinct. Cardam. Comp. ℥ j.
Spirt. Ammon. Co. ℥ ss.
M. sumat cochl. ij. 4ta quaque hora.

℞. Pil. Aloes cum Myrrha, ʒ ij.
Hydrarg. Submuriatis, ʒ ss.
M. et divide in Pil. xl. Capiat ij. nocte maneque pro re nata ad alvum solvendam.

July 2d.—At three o'clock this morning she was again suddenly seized with convulsions. The bowels are costive. Pulse 108 to 120.

Repr. Mist. et Pil, Cathartic. u. a.
Appr. Emplastrum Lyttæ capiti superiori.

July 3d.—She suffered pain before and after the application of the blister, but at the expiration of six hours, she suddenly exclaimed the pain was removed. In assisting to place her upright in the bed, it was observed that a great discharge had taken place from the blister. The pain, however, returned in about an hour, and continued, attended with convulsions and occasional delirium, for the space of eighteen hours. The cathartic medicines had produced no effect. Pulse 108.

Repr. Pil. Cathartic. et Mistura.

July 4th.—Continues much the same as yesterday. The pills had not

been given, and the mixture only in small quantities. The bowels are still costive.

Repr. Mist. Cathart. et Pil.

Appr. Sinapismi Pedis convexo.

July 5th.—The sinapisms had a good effect, but the convulsions did not cease until about three o'clock in the afternoon, when she endeavoured to raise herself up in bed, and a fluid rushed suddenly from the nostrils, and continued running for about ten minutes, which was followed by a discharge of a few drops of blood. The mercurial friction was recommended to be used every night until the mouth became affected, and the bowels to be kept open by the occasional use of purgatives. No part of the fluid was preserved.

July 18th.—Being absent from town, my friend and colleague, Dr. Brandreth, visited Miss M'Avoy, in consequence of the convulsions having again come on. He recommended blisters to be applied to the head, and to be renewed as soon as they were healed. Before, however, the parts, on which the blisters had been applied, were healed, she was relieved by a profuse perspiration which continued for twenty-four hours. She recovered from this attack so as to be able to sit up; but the right side being paralytic, she was obliged to be carried down stairs. She complained of pain in both sides, but always found relief from the mercurial friction, which she made use of whenever it returned.

August 2d.—Upon my return from the Isle of Man, I was induced to call upon Miss M'Avoy with Mr. Thomas, who told me she had become very expert in sewing. I found her in the act of sewing, which she appeared to execute with considerable neatness. She put into my hands a stole, which she had

assisted in finishing for the Rev. Edward Glover, her confessor, to whom she was under very considerable obligations for his kindness and attention during her illness. She had also made several neckerchiefs, and a frock for her little sister, and darned a pair of black silk gloves with great neatness. It appeared from the account of her mother, Mrs. Hughes, that before Miss M'Avoy was able to leave her bed after the first attack, she complained of weariness and anxiety, particularly in the night, which, from not sleeping well, appeared long and dull. Miss M'Avoy requested her mother to give her a needle, that she might try to thread it. The first time she made four attempts before she succeeded in threading it, and the second time she threaded the needle after two trials. She then asked for sewing, and her mother gave her a coarse towel. She was very awkward at first, and this awkwardness was much increased by not looking at her work, and her eyes seemed to be wandering in every direction, about the room, but where they ought to be. Her mother desired her to fix her eyes as if she were looking intently upon her work. Miss M'Avoy endeavoured to follow this advice, and applied with so much perseverance, that she succeeded not only in this point, but sewed much better than ever she had done before her deprivation of sight. Mr. Thomas and I particularly examined her eyes, exposed to the light of a candle, as near to the eye as possible without burning her, but without observing the slightest contraction or dilatation of the pupil, or the least sensibility in the eye. I have frequently since this period thrown my hand suddenly towards her face; have pretended to dash a pointed penknife at the eye; and have often applied the point of the finger in a quiet and steady manner as near as possible to the pupil, without observing the slightest sensation in the eye. Mr. Thomas assured me he has more than once put his finger upon the cornea itself, which then appeared insensible; but when he touched the eye-lid or eye-lash, she was instantly sensible of it. I have sat for a consi-

derable time attending to her sewing, but apparently indifferent about it; and during these visits, I have examined her every action as minutely as possible, and I have been satisfied she could not see. In threading her needle, it sometimes required only one effort, but often three or four, before she was successful. It was curious to observe her when, by any accident, the point of the thread was bent: she would try to thread the needle three or four times, and if she did not succeed, would put it into her mouth, and bite off a part, or take her finger and feel whether the thread were straight or not. More than once I have given her the needle with the point upwards, when she had accidentally dropped it: she attempted, but finding, after a few trials, that she could not thread it, she would put her finger upon the needle, and feeling the point, would turn and thread it: once, also, I broke the eye of a needle in drawing the thread hastily out, but was not aware of the circumstance until Miss M'Avoy had made several attempts to thread it; but failing, she felt the eye with her finger, and told me it was broken, which, upon examination, I found to be the case. The circumstance of Miss M'Avoy's knitting and sewing did not appear to be so very extraordinary, as there are many blind persons who are capable of doing the same.*

* It may be mentioned, that the blind people in the Asylum generally make use of the mouth and tongue in threading their needles. In the Blind Asylum of Liverpool, blind persons are not only taught to sew, knit, and spin, but become expert in the making of baskets of various descriptions, plain and coloured, twine, ropes, bears, carpets, rugs, slippers of list and worsted: a few make considerable progress in music, and often become teachers in their turn to others. The most of them, in a few years, are enabled to follow the different trades they have been taught, and to support themselves with credit and independence at their own houses. This institution owes its origin to the Rev. Henry Dannett; and after his secession from Liverpool, its prosperity was increased by the great attention and unwearied zeal of the late Pudsey Dawson, Esq. supported by the humane subscriptions of the inhabitants, and by strangers, who make it a principal object of their attention in their visits to Liverpool.

August 16th.—I was this morning desired to visit Miss M'Avoy. Mr. Thomas informed me she had, for four or five days previous to this attack, complained of loss of appetite; pain and beating in the head; pain in the right side; fluttering at the heart, and trembling of the limbs; the bowels costive; the pulse feeble and irregular, from 108 to 130 pulsations in the minute. Purgatives had been given to open the bowels, and blisters were applied to the fore and back parts of the head. The purgatives operated slightly, and the blisters had risen well, but no material alteration had taken place until the 15th August, at three o'clock in the morning, when she was seized with convulsions, and in this state she remains.

Repr. Pil. Cathartic. et Mist. Cathartic. u. a.

Si sit occasio vespere, Injice Enema Domesticum.

August 17th.—She complains of great coldness in the extremities, and they are slightly œdematous. The heat by Fahrenheit's thermometer, in the axilla, ancle, and mouth, is 108. The right side is paralytic: the intermissions of returning sense are of very short duration, seldom longer than the space of a minute. Complains, when sensible, of violent pain in the head, with oppression and a sense of tightness about the region of the heart, as if it were bound down with cords. The bowels are still costive; the glyster and opening medicines have not been given. Pulse 120.

Appr. Empl. Lyttæ regioni cordis et Repr. Mist. Cathart. et Pil. u. a.

August 18th.—Continues much the same: the pulse has varied more during this attack than before; generally from 96 to 120; but once I observed it to be 60, and Mr. Thomas felt it as low as 48. Little medicine could be given, from the state of insensibility in which she had lain. She has taken scarcely any food or drink.

August 24th.—On this day the convulsions ceased upon the appearance of the menses. It may be observed, that, after each attack, her appetite became extremely keen, her general health was much improved, and her spirits good. In the sight there appeared to be no improvement; the pupil was dilated, and insensible to the action of light.

In the general business of the house she was more active than ever she had been, assisting in making the beds, attending upon her half brothers and sisters, and was cheerful and agreeable in her manners to every body about her, and more particularly to those who visited at the house.

August 31st.—I called upon Miss M'Avoy this morning, and found her complaining of pain in the right side. Upon examination, I felt a considerable fulness and even induration in the right hypochondrium. She complained of pain in the left breast, and sometimes of pain and a sense of heat in the stomach. The menses disappeared two days after their recurrence on the 24th instant.

Capiat Magnesiæ cochleare theanum bis aut ter de die si urgeat dolor ventriculi.

She was requested to persevere in the use of the pills and ointment for a few weeks, until the mouth became affected. Miss M'Avoy enjoyed a better state of health, and I did not see her again till the middle of September.

I shall now give an account of the manner in which it is stated Miss M'Avoy found herself possessed of certain powers of an extraordinary nature, and the relation of which excited the curiosity as well as the criticism of many individuals. It was very early in September that her stepfather, Mr. Hughes, was reading a few pages in a small book belonging to one of his children, in which a history was given of the life of St. Thomas a Becket, not very favourable to

his general character. He mentioned it to his wife and daughter, and said he recollected having read once a very different account in another book. Miss M'Avoy told him that she had, before she was taken ill, seen an account of his life in a book entitled the Lives of the Saints, and if she had the book, could point out the place where it was. The book was put into her hands, and, in turning over the leaves, she pointed out the place, and read a few words. In a jocular manner, Mrs. Hughes asked her if she could feel the letters with her fingers. She said she had felt the words she had read, and would try, if her father would give her a book. A number of a folio bible, of tolerably large print, was given, and she read several verses to the great astonishment of her father and mother. Upon hearing this account, I was induced to visit her again with Mr. Thomas, and took considerable pains in examining the eyes; but we found little or no alteration in their general appearance, except that the pupil was not quite so much dilated as before; but the light of a candle appeared to have no influence upon it. We found her father's account very accurate, and that she really could read by the application of the finger to the letters with considerable fluency. As it was probable any other person, who had not the same opportunity of judging with Mr. Thomas and me, might think it possible she could see, I thought it right to bind something over the eyes, and I made use of a Manchester cotton shawl, which went twice round the head, crossed at the eyes, and was tied at the back of the head as firmly as she could bear it. I placed in her hand a number of the Bible above mentioned, and she read very correctly one verse of a chapter in Genesis. I then requested to have another book, which happened to be a volume of the Annals of the Church. I opened it, and she read to me several lines, with the alteration in a proper name of only one letter, which, upon being desired to read over again, she corrected. I then turned to a few lines of errata, and she read them cor-

rectly, only reading the letter l. as an I and a dot. The mode she follows is to place her fingers upon the book, and when she feels the letters, to proceed from the beginning to the extremity of the word, and back again until she names it, and so on to the next word. She often makes use of the fingers of both hands, particularly the fore fingers, and when they are in good order, she will read from twenty-five to thirty words in half a minute.

On the following day I mentioned the circumstance to a friend, who was anxious to see a phenomenon of this kind, and he met me in St. Paul's Square. Miss M'Avoy again read over to us a verse in the Bible, a few lines in the Annals of the Church, and the title page, mottoes, and several lines in a 12mo edition of Grahame's Sabbath. I placed her fingers upon a blank leaf, and desired her to read. The attempt was made, but she said she could not feel any letters. Her fingers were then placed upon another leaf, which she declared was also blank. I then desired her to feel the upper part of the leaf. She did so, and said she felt something, but it was so confused she could not make out what it was. The fact was, a lady's name had been written in the book, and when I took it from my library, I scratched the name out with a pen, so that it was not distinguishable to the eye. My friend brought with him a French assignat, of which it is more than probable Miss M'Avoy before did not even know the name. She read it over, and mentioned the lines upon it as distinct from the plain paper, and the colour of them, which was black: she also decyphered the address and post-mark of a letter received by that morning's post: she named the colours of the coats, waistcoats, and pantaloons of the gentlemen present with accuracy. She gave a correct account of a few cards, one or two of which were put under a small table placed before her. My friend Mr. Egerton Smith, who accompanied me, visited her afterwards several

times by himself, and he mentioned that she had named the blue, black, and red colours of marked lines, which he had given to her in a light in which he could not distinguish any colour, and also that she read a few lines of printing, nearly of the size of that called pearl type, in a similar light, occasioned only by a very little fire, which had been left in the grate, and with her back to the fire, Mrs. Hughes and Mr. Smith being so situated as to interrupt as much of the light as possible. Mr. Smith was perfectly satisfied that no other person could have distinguished the ruled lines, nor have read one word of even moderately sized print, if it had been brought nearly in contact with the grate. A little boy, the half brother of Miss M'Avoy, brought in several pieces of broken glass of different colours. She told very readily the different colours as they were given to her, and, in a few pieces, where the glass had not been perfectly fused, she named the colour of that part which was perfect, and of that which was imperfect.

Mr. Egerton Smith mentioned the following circumstances to me soon after they happened, and he has stated them in so clear and concise a manner, that I shall take the liberty of quoting his words, from the Liverpool Mercury of the 5th of September.

" Mr. Nichol, a scientific gentleman, who was delivering a course of philosophical lectures in Liverpool, having heard of this extraordinary property, applied to me to obtain an introduction to Miss M'Avoy, and I accompanied him to her house, along with Mr. James Smith, printer, of this town." " One part of the performance was so truly astonishing, that I should almost hesitate to relate it, if those two gentlemen had not been present to vouch for the truth. I had furnished myself with a set of stained landscape glasses, usually termed Claude Lorrain glasses. They were seven in number, contained in a frame. She ascertained the precise

shade of each correctly: one glass, however, appeared to embarrass her, and after considerable scrutiny, she said it was not black, nor dark-blue, nor dark-brown, but she thought it was a very very deep crimson. We did not know whether her conjecture was correct or not, as we could not ourselves ascertain the shade. By reflected light it appeared to us to be perfectly black; nor was the flame of the fire, which was stirred for the occasion, visible through it in the faintest degree. We had abandoned all expectation of determining this point, when the sun suddenly emerged from behind the clouds, and by that test, and that alone, were we enabled to discover that she was correct, as we could just discern the solar image of a very deep crimson. It has been said, and with some plausibility, that this must have been a bold guess on her part: if not, it will puzzle our physiologists to explain, how a person reputed to be blind, with an opake bandage also over her eyes, could declare the colour of a glass, which persons in full enjoyment of their eye sight, and without any such obstacles, could not discern by any other light than that of the meridian sun!"

"At this meeting we were informed that Miss M'Avoy had recently found out that this extraordinary faculty was not confined to her fingers, and that she could also distinguish the colour of an object which was brought into contact with the back of her hands. This was immediately made the subject of experiment by Mr. Nichol, who successively applied several objects which he had with him to that part of the hand; in placing which, he used so much precaution, that I could not see them myself, although my eyes were fixed upon his hands. She was completely successful also upon this occasion."

She distinguished the different colours of silk, of cotton, or of wool, and the brighter and more vivid the colour, so much greater is the pleasurable sensation

it affords. If they consist of many colours in the same piece, she will point out each colour, and trace the line where it terminates. If the silks are of that kind called shot silks, she will tell the colour of the ground as well as the intermixture. If the different pieces are besmeared with oil, or any greasy substance, she cannot so easily distinguish the colour; but if it is nearly faded, she will point out where it is faded or where it is bright. She can distinguish the colours of the paintings of enamelled or varnished boxes, will trace the outline of the figures, and will very generally state the subject of the painting with a degree of accuracy which is surprising. At times, however, this feeling is suddenly lost, and after describing colours, reading, &c. with great nicety, she will declare she cannot tell the colour, or will say it is black. When this is the case, the fingers become extremely cold, and the power will often return as the fingers become warmer.

The persons who have visited her once, are generally known to her again by their manner of walking or breathing, or by the voice. She tells the difference in the size of one person from another who enters the room, if asked to do so. If a colour be placed upon the back of the hand, or upon the cheek, she will name it correctly. She has at different times told colours with her fingers, read with her hands behind her and under the bed clothes, or under a sheet of paper, but seldom for any length of time. She soon finds out if there be any obstruction between her mouth and nostrils and the object. It would almost appear that the breathing, and probably the sense of smelling, were necessary to the more complete elucidation of the colour, &c.

The mode adopted for binding her eyes, I have already mentioned, was the Manchester shawl, and it was generally agreed to be sufficient for the purpose;

but it was not thought so by a few individuals, and other means were adopted to satisfy them. A pair of gogglers were obtained, and covered with dark-blue paper. Many trials were made with these, sometimes with, and often without a silk handkerchief tied over the gogglers, and over the head. At this period the gogglers seemed to be the most in use for covering the eyes, and various additions were made to them, according to the various wishes of the individuals who visited her, until they were made into a complete mask, covering the whole of the face except the nostrils and mouth. They were tied by several pieces of tape at the back of the head, in almost every direction, and two pieces of tape crossed each other under the nose, just below where a line of cotton wool was sewed in, so as to prevent any ray of light from passing upwards. During the continuance of a severe inflammation of the eyes, which had been produced probably by the heat occasioned by the gogglers, which were kept on for a considerable time, Mr. Thomas and I made use of the pledgets, dipped in a weak solution of acetate of lead, over which a neckcloth was tied, which answered every purpose we could wish. Occasionally we only pressed the eyelids gently down with the fingers, and held them in that situation until she had gone through the trial intended.

The rumour of Miss M'Avoy's talent in distinguishing colours, soon occasioned a great influx of visitors, who went away generally satisfied she really possessed the power. A considerable number of medical men had already visited her, and it became a subject of conversation at Dr. Brandreth's, where a large party dined on the 26th of October. It was agreed that a certain number should meet me in St. Paul's Square, on the Monday following, at eleven o'clock, and I sent a message to Mr. Hughes, stating my intention. I found that, at the request of Mr. Latham, surgeon and apothecary of Wavertree, Miss

M'Avoy had gone to spend a few days with his family. A few of the gentlemen put off their intention to another opportunity; but Drs. Trail and Jardine, Mr. Redmayne, Mr. Kent and I, went to Wavertree, and we were very soon followed by Drs. Formby and Vose. Before our arrival, several persons had visited her, and she had been engaged more or less with them since breakfast time. She had named and told colours, and I have understood they were particularly satisfied that Miss M'Avoy possessed this extraordinary power. The motion of the carriage in which she went on Sunday to Wavertree, had brought on the headach; but the change of air had so good an effect, that she was enabled to lie down at night in bed, and had slept soundly, which had not happened for several weeks before. Dr. Jardine took notes of the experiments made upon this occasion, and I shall now recapitulate them from his memoranda.

" It was remarked, that at a little distance there was the appearance of very imperfect vision. The pupils contracted upon exposure to candle-light, but more slowly than is usual.* Pressure upon the eye produces much pain. Pulse 120; evident agitation; very cold hands.

" EXPERIMENT I.

" In the light, with gogglers on, read many lines in the Roman History, sometimes right, but often wrong. A large octavo book being placed between her face and the Roman history, she was soon aware of it, and threw up her hand to remove it.

---

* Dr. Trail informs me that he and Dr. Vose, thought the pupils contracted and dilated as much as in any person who could see distinctly, but the other gentlemen present were of a different opinion.

" EXPERIMENT II.

" In a room darkened but very imperfectly so, owing to the opening of the shutters and the light of a large fire; gogglers on; the following colours were given into her hands:—

Pink, ...	*answered*, ...		White, then light pink.
Green, ...	,, ...		Blue.
Yellow, ...	,, ...		White or yellow.
White, with red lines, ...	,, ...		Pale pink and white.
Brown, ...	,, ...		Black.
Plaid of various colours, ...	,, ...		Uncertain.
Printed card, ...	,, ...		Made nothing of it.
Dr. Trail's varnished box, ..	,, ...		White lines and letters.—*The lines visible to Drs. Trail and Jardine.*

She put her hand three times to the string of the gogglers.

* The glasses, painted in the inside red, ...	*answered*, ...		Light green.

" EXPERIMENT III.

" In the light, eyes covered with a silk handkerchief and lint, or gogglers and lint.

Small cylinder of green glass,	*answered*, ...		Green.
Ditto, fluted white, ...	,, ...		White.
Ditto, purple, ...	,, ...		Purple.
Ditto, white, ...	,, ...		Green.
Black velvet, ...	,, ...		Scarlet.
Purple velvet, ...	,, ...		Black.

* They were of common green window glass.

Blue velvet, ...	*answered*, ...	Nothing.
Drab breeches, ...	,, ...	1st, Drab, then black.
White silk, ...	,, ...	Purple.
Green ditto, ...	,, ...	Nothing.

" EXPERIMENT IV.

" In the same light, eyes uncovered.

Lilac and yellow green, ...	*answered*, ...	Fawn colour.
Blue ditto, ...	,, ...	Blue.
Green ditto, ...	,, ...	Green.
Black velvet, ...	,, ...	Purple.
Purple velvet, ...	,, ...	Purple.
White silk, ...	,, ...	White.
Blue Cloth, ...	,, ...	Blue.
Lilac and straw, ...	,, ...	Lilac and straw.
Lilac, ...	,, ...	Lilac.
Blue and red stripe, ...	,, ...	Lilac stripe, and darker lilac than the last.

" EXPERIMENT V.

" In the same light, eyes covered with gogglers and lint.

Blue velvet, ...	*answered*, ...	Lilac.
Scarlet cloth, ...	,, ...	Brown.
Green ditto, ...	,, ...	Blue.
Red sealing wax, ...	,, ...	Black.
Brown and yellow stripped cotton, ...	,, ...	Nothing.

" EXPERIMENT VI.

" Eyes uncovered.

The red painted glasses, not touching the sides, ...	*answered*, ...	Red."

From these experiments, however unsatisfactory, we may draw the conclusion, that she did not entirely fail. At the time the eyes were covered with the gogglers, this mode appeared satisfactory to the gentlemen present. She read a few lines in the Roman History, sometimes correctly, but more frequently she was incorrect. In the partially darkened room, she made nothing out, except the white lines and letters upon Dr. Trail's varnished snuff box, the white lines of which, Drs. Trail and Jardine could scarcely see. In the third experiment, where the eyes were covered with a handkerchief and lint, or gogglers and lint, several pieces of glass were given to her, and she told three colours out of four. It should be mentioned however, that she brought these glasses from home, and it may be possibly supposed, she recollected the figures of the pieces of glass, as she had repeatedly fingered them. If this were the case, as the glasses were numerous, her memory must have been very tenacious to have retained the forms, and, by the forms, to have told the colours of the glass. In the fourth experiment, the eyes were uncovered, and she told seven colours out of ten. If she had been capable of seeing, she might as well have told them all correctly. We ought not, I think, in candour, to attribute this greater degree of power, when the eyes were uncovered, to her seeing, but to the relief afforded, and to the remission of pain and throbbing in the head, when the pressure from the lint, or cotton, &c. was removed. In the fifth experiment, her eyes were covered with the gogglers, stuffed again with lint, and she did not tell any thing. In the sixth and last experiment, the red painted glasses were given to her, when her eyes were uncovered, and she said the colour was red. Upon the whole, the trial was unfortunate, and it was afterwards currently reported that Miss M'Avoy could see. This disappointment was injurious in many respects, not only as it related to the suspicions thrown upon Miss M'Avoy's veracity; but as it caused a censure to be cast upon Mr. Thomas, me, and

upon many others, in allowing ourselves to be imposed upon. It was still more unfortunate for the investigation of the truth, as it produced a lukewarmness in many respectable individuals of our profession, which prevented them from prosecuting the enquiry.

I cannot avoid blaming myself, for not having considered the possibility of Miss M'Avoy being agitated by the suddenness of our visit; but, not having before experienced any thing of this kind, I was less guarded than I should have been. Indeed, the pleasurable feeling Miss M'Avoy seemed to have at the time she was describing colours, reading, &c. prevented me from suspecting that we should meet with any obstacle of this nature.

Agitation, was however evident in Miss M'Avoy's appearance; and many circumstances, during the examination, tended to increase it; as changing the mode adopted for covering the eyes, by stuffing the gogglers with cotton or lint, which, pressing upon the ball, acutely sensible from previous inflammation, produced violent pain and throbbing in the head; by the doubt expressed in her hearing, of her ability to do what it had been declared she had already done, and by the anxiety she felt at not being able to prove she possessed the power at the very time it was most necessary, when a succession of experiments were making to ascertain the fact. She had taken no food from breakfast, and had been also exhausted by the former trials in the morning. Her spirits were consequently depressed by a combination of circumstances of this nature, acting upon a debilitated, irritable, and diseased habit. The impression, made upon the medical gentlemen present at Wavertree, was, that she could see, and I became doubtful of my former opinion; but, the more I considered the result of this examination, the more I was satisfied the failure originated rather from the circum-

stances above named, than from any deception on Miss M'Avoy's part; and I did not think I was doing justice to Miss M'Avoy's character, or to my own, by giving up the judgment I had formed, from repeated trials, that she possessed this power.

Whatever cause might have produced the blindness, I shall not enter into at present; but, it is as certain, as any fact can be, that Miss M'Avoy did become blind on the 6th or 7th of June, 1816; and the symptoms related, as occurring previous to my visit on the 5th, were indicative that such an event might be expected. The evidence which repeated examination of the eyes, during her protracted illness, afforded, was positive also, that she continued to be blind until a very short time before the 26th of October, when Mr. James Dawson first observed the contraction and dilatation of the pupil, upon exposure to the light of a candle, but it seemed, however closely applied, to produce no other effect upon the eyes. Mr. James Dawson visited Miss M'Avoy some time before this period, but had not observed any contraction or dilatation.

The experiments before made were satisfactory to my mind that I had not been deceived; but in a case of this kind, few persons who think for themselves, will be induced to imbibe the opinion of another, without the strictest investigation of its truth. Let it be allowed, however, for a moment, that Miss M'Avoy had the most perfect vision, yet the various means adopted to cover the eyes, if not satisfactory in all cases, were generally so to those who had covered their eyes in a similar manner. The patience with which she suffered any new plan to be tried, is a presumptive proof that she knew herself to be blind, and was anxious that every other person should think so. Her character for truth and integrity, is attested by her confessor, the Rev. Edward Glover, which, in a

moral point of view, convinces him she does not deceive. The evidence of Mr. Glover, Mr. Thomas, and myself, will have some weight upon the public mind, but I cannot expect it will satisfy every individual. Every facility has been given to those who had the curiosity to visit Miss M'Avoy, of which numerous parties have availed themselves; and they are convinced, at least, if she were not blind, that she possessed the power attributed to her, when blind-folded. Several who imagined themselves to be more philosophically gifted, declared, although the eyes were allowed to be perfectly covered, this faculty must be deceptive. Other persons asserted her eyes must be more peculiarly acute, and that she could see with the smallest possible quantity of light; a very few declared she must see sideways, downward or even backward; and one individual amused the party he accompanied, by saying she could see through the nose, which he had known to be the case in another instance; in fine, the generality became proselytes to the evidence of their senses, but a few were found who doubted that evidence. Dr. Trail and Dr. Formby visited her separately after the Wavertree examination, but neither of them was satisfied; although when the latter attended, other persons were present to whom she named several colours of silks, cloths, wafers, &c. but she never could name a colour to him, unless it were one which he held above her head. In prosecuting the narration of Miss M'Avoy's case, an account of the examination at which Dr. Trail was present will be given. Mr. Kent visited her with me, and did not hesitate to alter the opinion he had formed at Wavertree. Dr. Jardine also saw her again, and to satisfy himself still more, he repeated his visits very often, and is as perfectly convinced as man can be, who has paid particular attention to the subject, that she possesses the power of reading with the fingers, distinguishing colours, &c. On the contrary, several individuals of respectability, who had seen her, and been satisfied she possessed the power, have altered their opinion, which may have

arisen from trifling circumstances every person is eager to catch at, exciting suspicion of deception.

Miss M'Avoy often appears to look earnestly, and sometimes sideways at the object; and on those days when the feeling is not very acute, from pain and throbbing in the head, from extreme coldness, clammy moisture, or burning heat of the hands, from agitation, which is often increased very much by failure in two or three of the first attempts, or from the heat occasioned by the gogglers, she frequently puts her hands to the mouth or to the head, or attempts to loosen the strings of the gogglers, which give her at these times a feeling of being too tight. Miss M'Avoy seldom does any thing of this kind, when these powers are more perfect. Mr. Bickersteth, a respectable surgeon, and one of my colleagues at the Infirmary, called upon Miss M'Avoy on the Friday evening previous to the 26th October. He gave her, amongst other things, a piece of green silk, striped with one or more yellow lines, and certain figures written upon it; of which Mr. Bickersteth, before he gave it to her, had not taken notice. She said the lines were *white,* and repeated the number of the figures Mr. Bickersteth had not observed. On the Saturday following, Mr. B. mentioned the general circumstances which had occurred, at the Infirmary, and Dr. Gerard, who had formerly been a Physician of that Institution, was present. It was agreed to visit Miss M'Avoy at one o'clock. We called upon Mr. Thomas, and proceeded to St. Paul's square. The eyes of Miss M'Avoy were covered with the gogglers, and she told almost every colour given to her, and read, &c. When, however, the piece of green silk was again put into her hands, she said this is the same piece of silk which was given to me last night; it then seemed to be green and white lines, but it is now green and yellow: light yellow, or straw-colour, would appear to any one white by candle light, and it did appear white to Miss M'Avoy. The

eyes were covered on both occasions. On the 31st of October, I have been informed by a lady, that Miss M'Avoy visited Mr. Charles Clements in Queen-street. There was little fire in the room, and it was so dark that candles were brought in, but were afterwards ordered away, from the wish they had to hear Miss M'Avoy read, &c. A book just published upon brewing, was put into her hands, and she read a few lines correctly, but in attempting to read the word vat, she only made out a *v* and a *t*. Mr. Clements was induced to take the book, and he had some difficulty, from the small quantity of fire in the grate, to distinguish the words: he, however, found it out to be the letter *a*, turned upside down. She told also the colours of different substances given to her, very accurately, in a light by which no other person could distinguish them, and when the parties were standing between her and the fire.

The effects of the Wavertree expedition, and the agitation she suffered, soon became visible, in a return of the pain in the head and right side, which obliged her to have recourse again to the mercurial friction, which relieved the pain in the side. The pain in the head was again attended by the beating sensation or throbbing, with loss of appetite and giddiness.

On Sunday, the 3d of November, the right side twitched frequently. On the Monday and Tuesday following, this symptom increased so much that she could not feed herself; and on Wednesday morning the convulsions returned. The body had been uniformly costive during several days. Her pulse varied from 108 to 120 pulsations in a minute.

November 7th.—I was sent for to visit Miss M'Avoy to-day, and I found her in strong convulsions, with frequent twitching of the limbs. The intervals of sensibility were of very short duration.

Abradatur Capillitium et Appr. Empl. Lyttæ amplis. capiti superiori.

R. Hydrargyri Submur. gr. v.
Pulv. Rad. Jalapæ gr xv.
Conf. Rosæ gal. q. s. ut fiant Pil. vj. h. s. s.

November 8th.—The blister had not been applied, from the difficulty of shaving the head; nor had the ointment been used from the time of this attack. The cathartic pills produced no effect. She complained of a sense of weight in the breast, and oppression about the heart. The convulsions and twitchings are not abated.

Appr. Empl. Lyttæ regioni cordis.
Capiat Magnesiæ ℥ ss bis aut ter de die.

November 9th.—The bowels were slightly acted upon by the magnesia.—The convulsions are much the same.—The blister rose well, and relieved the pain in the region of the heart.

Appr. Empl. Lyttæ cervici.
Repr. Pil et Mist. Cathartic.

November 10th.—In a few hours, after the blister had been applied, it rose well, and discharged freely.—The right side is again paralytic.—The other symptoms are not lessened in violence.—The pills and mixture had produced no evacuation.

Repr. Mist. Cathartic.

November 11th.—The convulsions still continue. The mixture operated more freely; she had scarcely taken any food during this attack.

℞. Ammoniæ Carbon. gr. x.
Gum. Assafœtid. gr. xii.
Confect. aromat. q. s. ut fiant Pil. vi. capiat ij. ter de die.

November 12th.—The convulsions are less violent, and she lies in a more quiescent state than before, scarcely appearing to breathe, but with occasional delirium; sometimes a pleasing smile is observed, and again a frown, with a slight contraction of the muscles of the face. The pills had only been taken once, as they produced uneasiness, and a sensation of heat in the stomach.

Abrádato Capillitio, Appr. Empl. Lyttæ capiti.
Repr. Mist. Cathartic. u. a.
Appr. Sinapismi Pedibus.

November 13th.—The blister and sinapisms acted well. The convulsions and beating of the head have entirely ceased, and she is now quite sensible. She feels great soreness all over the body. The left eye is a good deal inflamed, and she complains of the tears scalding her. In the former attacks, the secretion of tears was scarcely perceptible. The relief afforded her was preceded by a sudden discharge of fluid from the nose, which continued for about ten minutes, and was followed by a few drops of blood.

℞. Plumbi Acetat. gr. xv.
Aquæ Rosæ ℥ viij.
M. ut fl. Collyrium.

November 14.—Continues much the same; has had no motion since the 11th.

Repr. Pilul. Cathartic. et Mist.

November 16.—The bowels were freely opened.—She still complains of headach.—The pulse during the attack was very variable from 96 to 140, and even 160 pulsations in a minute. This sometimes took place during the visit.

November 17th.—Continues much as yesterday. She appeared languid, and did not recover quite so well from this attack.

Frica Linimenti Hydrargyri Camph. ℥ i. in latus dextrum quaque nocte.

Repr. Collyrium et Mist. Cathartic. pro re nata.

December 1st.—The gums were very spongy with the mercury; and there is considerable fœtor in the breath, but no ptyalism. She complains of pain and beating of the head, and palpitation of the heart. The eye is still sore, but the eye water relieves it. The bowels are costive.

Repr. Collyrium et Mist. Cathartic.

December 2d.—The symptoms of yesterday are much increased in violence: the bowels continue costive.

Repr. Pil. Cathartic. et Mist.

Appr. Empl. Lyttæ capiti abradato.

December 3d.—The pills and mixture operated freely. In other respects she continues much the same. The blisters had not been applied.

December 4th.—A seton was recommended to be made in the nape of the neck, but the patient would not consent to it.

December 5th.—At three o'clock, A. M. she was seized with convulsions

attended with frequent twitchings and drawing up of the legs. If these were pressed against, the resistance was very considerable. She appeared quite stiff, as if dead, upon being raised by Mr. Thomas and her mother. The toes are contracted to the inside of the foot. She is much affected with stupor, and the right side is paralytic.

December 6th.—The blister rose pretty well, and the bowels were opened with the mixture.

December 7th.—The convulsions are much the same.

December 8th.—At three o'clock P. M. yesterday, she was seized with a sense of suffocation, and a fluid passed down into the stomach with a sort of gurgling noise. Mr. Thomas saw Miss M'Avoy immediately after it began, and felt the breath extremely fœtid and offensive. With some difficulty, he obtained about a meat spoonful of fluid, which was very tenacious, and, in consistence and colour, resembled the white of an egg. I wished, if possible, to get more of it, and requested they would preserve the small portion already obtained; but through the negligence of the servant who assisted in the house, it was lost, and we were not able, through Miss M'Avoy's excessive weakness, to procure another supply.

At half past one, P. M. when I visited her, the pulse was 108, and tolerably firm. The convulsions are much better, but the twitchings occasionally return, and she generally appears to lie in a state of insensibility, and suffers under a stoppage of respiration every now and then, apparently from the fluid passing downwards, and closing the epiglottis, which prevents respiration for a few seconds. As soon as the fluid has passed. respiration takes place, and continues

until again interrupted in a similar way. In the night, a sensation of faintness comes on, and she describes her feeling as if she was sinking through the bed.

December 10th.—Continues much the same as yesterday. The bowels have not been opened.

Repr. Pilulæ et Mistura Cathartic.

December 11th.—The pills and mixture have not operated. The gurgling noise, as the fluid passed down into the stomach, is, in a great measure, gone off, and the discharge of fluid appears to be lessening every day; but, there is observable, a very considerable degree of spasmodic contraction in the muscles of deglutition, and in the os hyoides.

R. Spt. Vin. Camphor, ℥ i. ss.
Æther. Sulphuric.
Tinct. Opii, āā. ℥ ss. M. frica partes affectas bis de die.
Repr. Pil. Cathartic. et Mistura.
Injice Enema fœtidum statim.

December 12th.—The glyster had not been given. The pills and mixture did not operate.

Cont. Pil. et Mist. Cathartic.

December 13th.—She continued much the same until the 15th instant; but the contraction of the muscles of the throat, &c. gradually decreased.

December 16th.—At three o'clock, P. M. she became sensible.—The bowels were freely opened. She has more power in the right side. The twitchings are relieved; but the sensation excited in the foot and hand, by

sudden pressure upon the floor, bed, &c. still remains. At different times, after the examination at Wavertree, Miss M'Avoy continued to distinguish colours, when put into her hand, to sew, read, &c.; but not with so much certainty as she did at first. She was easily agitated, and, if any one disputed the power she possessed, it always produced irritation, and made her less able to give proofs of it.

December 20th.—Miss M'Avoy is much better, and distinguished any colour given to her with great certainty.

December 24th.—Complains of pain in the right side and shoulder. In the right hypochondrium, there is considerable fullness. She distinguished colours to day; but very soon lost the power altogether.

Repr. Frictio, in Latus dextrum, Lin. Hydrarg. Camph. u. a.

Repr. Pil. et Mist. Cathartic. cras mane, si sit occasio, ad alvum solvendam.

December 27th.—The medicines operated freely, and she feels herself better.

December 30th.—Continues to improve.

January 17th, 1817.—With the amendment of Miss M'Avoy's health, the faculty of distinguishing colours, &c. returned. On this day, she not only declared the colour of different cloths, cotton, and silk, but several pieces of silk which were inclosed in a small phial bottle; she traced with her finger the edge of each; and, when another phial was given, which did not contain anything, she declared it to be empty. Bottles of white glass, holding magnesia, red pre-

cipitate, red oxyd of mercury, and bark, were separately given to her, and she accurately named the colour, and told how high the bottle was filled with each substance : two small bottles, the one containing water, and the other spirits of wine, were placed in her hand ; she said, the first was colourless, like water, and the second was similar in colour, but had a different feel, being much warmer. I was not certain which was the water, and which the spirits of wine, as there was not a perceptible difference in colour, until I tasted the contents of the two phials, when the second was proved to be the spirits of wine. Soon after this period, the Rev. Edward Glover asked her, if she could tell the time of the day, by feeling the surface of the glass, covering the dial plate of a watch. Her answer was, she had never tried it. A watch was given into her hands : she felt the surface of the glass, and very soon named the hour. She was afterwards so exact, that she not only named the hour, but the number of minutes the minute hand had passed the hour. Once I gave her my watch, when the hour was twelve o'clock. She mentioned the hour, but observed, there was only one hand ; the minute hand being exactly over the hour hand. Mr. Glover assured me, that for several days he was afraid of speaking of the circumstance, lest he should be laughed at ; but, she so often repeated this experiment in his presence, and in that of other persons, that he made no hesitation in mentioning it. She told the colour of the different hands, whether they were of gold or of steel. She distinguished a gold from a silver watch. Brass and copper were also submitted to her touch, and she immediately discovered the one from the other. The colours of various seals and stones, whether mixed or not, were correctly named ; as well as those of gems ; but it was only the colour, and not the nature of the stone, unless she had before been acquainted with it. The eyes were covered with the gogglers.

January 19th.—The mercurial friction had been continued until the present time, but it was now omitted, as the mouth became very sore, and the gums spongy, but with little or no ptyalism. An astringent gargle was ordered, and she was requested to take the cathartic mixture occasionally to open the bowels.

February 12th.—The soreness in the mouth and gums, is, in a great measure, removed. Complains of great oppression about the heart; difficult breathing, with an almost constant heaving to and fro of the whole breast; of pain in the head and side; and inability to lie down. Body costive; pulse small, frequent and irregular, from 108 to 120.

Repr. Pil. et Mist. Cathartic. u. a.

Repr. Frictio Ungt. Hydrarg.

February 13th.—The bowels have been freely opened. Continues much the same as yesterday.

Appr. Empl. Picis Burdig. Sterno.

February 17th.—Complains still of uneasiness about the region of the heart. The other symptoms are not materially alleviated.

Appr. Empl. Lyttæ regioni cordis.

Repr. Mist. Cathartic. u. a.

February 20th.—The blister considerably relieved the oppression about the heart. She appeared very much exhausted by attempting to distinguish colours, &c. to oblige the numerous visitors who assailed her from all quarters, and we were under the necessity of requesting Mrs. Hughes to refuse them admis-

sion, until she recovered from these unpleasant symptoms. The menses had not appeared since the month of November. Pulse 120.

℞. Gum. Assafœtid.
Pulv. G. Myrrhæ, āā. ʒ j.
Ferri Sulphat. Præc. ʒ i. ss.
Syrupi simplicis q. s. ut fiat massa in Pil. xl. dividenda. Capiat iij. ter de die.

February 24th.—Our patient is no better. The heaving at the breast is occasionally suspended, and she appears, during this interval, not to breathe at all; but she has never been insensible or convulsed. The bowels are costive.

Repr. Mist. Cathartic.
℞. Mist. Camphor. ℥ vij. ʒ ij.
Æther. Sulph.
Spirt. Ammon. Comp. āā. ʒ iij.
M. capiat cochl. ij. 4ta quaque hora.

February 26th.—The compound camphorated mixture was only once taken, and as it caused great uneasiness in the stomach, it was omitted. The symptoms are much increased in violence. The pulse is excessively feeble: has little or no cough: complains of pain, oppression, and palpitation about the heart; but there is no palpitation to be felt externally. She appears very much exhausted. The breathing is very laborious; but yet there does not seem to be any inflammatory action. As a forlorn hope, however, I requested Mr. Thomas to open a vein in the arm, and he obtained three ounces of blood, when she fainted.

Repr. Pil. Cathartic. vj.

February 27th.—Appears rather better: the agitation of the breast is not so

violent. Pulse 120, and feeble. The bowels have been opened. The blood had a slightly buffy coat. Complains of pain in the breast.

Appr. Empl. Lyttæ sterno.

R. Pulv. Ipecac. gr. vi.
—— Antimon. gr. xxiv.
Sacch. Alb. ℥ ij.
M. et divide in chartas xii. Capt. j. 4ta, q. q. hora.

February 28th.—Has taken only one powder, as it produced heart-burn. A tea spoonful of magnesia was given to her, and she was advised to repeat it twice a-day, as occasion might require.

March 2d.—The magnesia gave her uneasiness in the stomach, instead of relief. The other symptoms became worse again, particularly the agitation of the breast, and difficulty in breathing. I recommended it to Mr. Thomas to open a vein, which was immediately done, and about three or four ounces of blood were obtained before she became faint. This blood was also slightly buffy. Complained yesterday of difficulty in passing urine, but was relieved by a mixture Mr. Thomas ordered with spirit of nitric æther and oxymel of squills. Pulse 108 to 120. The bowels are open.

March 5th.—She found considerable relief from the last bleeding; but as the laborious breathing had not entirely ceased, Mr. Thomas was requested to take more blood from the arm, and about four ounces were obtained with some difficulty. This blood had no buffy coat. She appeared very low and weak.

March 9th.—Complains of heat and thirst: in other respects she is better.

℞. Aquæ Fontanæ, ℥ viij.
Kali Ærat. ℥ ij. ℈ ij.
M. Capiat cochl. ij. cū. j. suc. Limon. 4ta, q. q. hora.

March 14th.—The former symptoms are again aggravated.

Fiat Venæ Sectio et detrahantur, sanguinis, ℥ vi.

March 15th.—Mr. Thomas was not able to get more than a few drops of blood, although he opened the veins in both arms. Continues much the same as yesterday.

Repr. Venæ Sectio.

March 16th.—Mr. Thomas obtained about four ounces of blood, which had no buffy appearance.

March 18th.—The last bleeding relieved her very much. She falls occasionally into an apparent state of syncope; but she generally hears what is said in the room. Pulse 84 to 108.

℞. Infus. Calumb. ℥ viij.
Kali Ærat. ℥ ij. ℈ ij.
M. sumat. cochl. ij. maj. cū. j. suc. Limon. 4ta, q. q. hora.
Fiat fonticulus Causticus, more solito, infra pectus sinistrum.

About ten days after the caustic was applied, Miss M'Avoy first made use of the magnifying glass: the account she gives of the circumstance is, that she wished to take the saline mixture, and, as her mother was not in the house, she attempted to read the direction with her fingers, but, the writing being very

small, she could not make it out. Knowing that there was a magnifying glass on the chimney piece, it struck her, that she might be able to read it through this glass, and she applied her fingers to the glass, and then read the direction upon the label*.

March 22d.—The power of distinguishing colours, &c. became very deficient after this period. Her hands and fingers were generally cold. In other respects, she appeared tolerably well, and, about the end of the month, made a shirt for her little brother.

April 12th.—Her health has improved daily; the power, which had suffered considerable diminution, if not temporary extinction, returned; and occasioned such an influx of visitors, as again seriously to affect her health. I advised her mother to send her into the country, for a few weeks, which she promised to do, as soon as lodgings could be obtained.

On the 19th of April, Dr. Jardine requested that he might visit Miss M'Avoy, before she went into the country; and an appointment was made at eight o'clock in the evening. I called upon Dr. Jardine, and found at his house, Messrs. Bickersteth, Senior and Junior. We proceeded to St. Paul's Square. Mr. Thomas was also present. The mode of covering the eyes this evening, was one I had tried, for the first time, a few days before, and consisted of a piece of gold beater's skin, sufficiently large to cover the eye, extended, and sewed upon two pieces of velvet, which adhered to each other over the nose. The edge of the velvet could be turned up, so that, when the gold beater's

* I think she once said, there were other ladies present at the time. Why did she not ask one of them to read it for her?

skin was wetted and applied to the eyes, and then allowed to dry, it appeared closely adhering to the skin. This mode of covering was pleasanter to Miss M'Avoy than any other I had before used; and it was a cooler application than either the gogglers, or the Manchester shawl. She named the colour of every piece of silk that was given to her, except one, and that she told afterwards. A piece of green silk was inclosed between two pieces of glass, and the edges of the glass were sealed with sealing wax: upon feeling the outside of the glass, she said the colour was green: a piece of red silk was inclosed in a similar manner, which she named correctly. She told the hour and minutes in two watches, which differed in time from each other. When placed in a situation of complete darkness, three cards were given to her: the two first were clubs, and the last hearts; they were all black. A green and black plaid was given into her hands also, when the room was quite dark; but it was black to her feeling. Upon Dr. Jardine opening the door, a feeble light was thrown upon a part of the plaid, and she then declared it to be green and black.

During some of the former examinations, Dr. Jardine made use of an egg, to cover the eyes, prepared by boiling, until it became quite hard: it was then divided longitudinally, and the yolk taken out. Dough was also tried, and, if made of a proper consistence, and kneaded well, answered every purpose. A ribband applied over the eyes, so as to leave the upper and lower parts of the egg and dough visible, made the experiment more satisfactory.

It was about this period that Miss M'Avoy endeavoured to amuse herself in making small baskets of coloured paper: it was curious to observe her passing the paper through the interstices of the basket work. She was often foiled by the point of the paper being turned inward or outward. If she found she did not succeed after two or three attempts, she used her fingers to straighten it,

and then pushed it through. She sometimes used a pin, or needle, to raise the paper under which the point should pass.*

April 20th.—Miss M'Avoy went over the water to Seacome; but, finding her complaints increasing, she was induced to return on the 4th of May.

May 6th.—She complains to-day of giddiness, pain in the breast, and right side. The head is easily affected by the least noise. Pulse 120, and firmer than usual. Body costive.

Fiat V. S. et Detr. Sang. e brachio, ℥ iv. ad ℥ vi.

Repr. Pil. Cathartic. vi.

Repr. Mist. Cathartic.

May 9th.—Mr. Thomas opened a vein on the 6th instant, but obtained little blood. Complains of great oppression in breathing, and there is a violent and almost constant action of the Diaphragm. Tongue natural. Pulse moderately firm, from 98 to 108. Body costive.

Repr. statim Venæ Sectio.

The blood taken away was only three ounces, and it had not any buffy appearance.

Repr. Pil. Cathartic. vi. h. s. s. et Mist. Cathartic cras mane, si sit occasio ad alvum solvendam.

May 10th.—The bleeding did not relieve the symptoms. Complains still of great oppression about the heart. Body costive. Pulse 120.

Repr. Pil. et Mist. Cathartic.

Appr. Hirudines vi. Pedibus et Empl. Lyttæ inter Scapulas.

---

* A basket, made by Miss M'Avoy, is now in the possession of the Countess of Derby.

May 11th.—The bowels were opened freely. The blister was not applied, as she had been seized with convulsions during the time her feet were immersed in the warm water, after the leeches had fallen off. They bled for about an hour only. The convulsions continued nearly a quarter of an hour. She was carried to bed, and had two successive attacks, of nearly the same duration. She had not been able to lie down for several nights, and obtained little or no sleep. The heaving of the breast, and the convulsive motion of the diaphragm are more violent.

Appr. Empl. Lyttæ inter Scapulas.

℞. Infus. Humuli ℥ vii. ss.

Spir. Æther. Sulph. Comp. ℥ ss.

M. sumat cochl. ij. maj. 4ta, q. q. hora.

May 12th.—The above mixture produced great uneasiness and heat in the stomach, and she did not repeat it. This has been the case with almost every medicine she has taken, except the purgatives and saline mixture, so that they have been uniformly laid aside after the administration of the first dose. It has been often the case also with the magnesia, and with the carbonate of potash, when given without the acid. The convulsive motion of the diaphragm continues, but she is not worse than yesterday. The blister rose well.

℞. Æther. Sulphur.

Spirt. Vin. Camphor.

Tinct. Opii, āā. ℥ vi.

M. et frica cordis scrobiculum bis aut ter de die.

Repr. Mist. Cathartic.

May 13th.—The bowels have been opened. The convulsive motion continues much the same. Pulse from 96 to 108.

May 14th.—Complains of more pain in the breast and tightness about the heart.

Repr. Pil. Cathartic. b. s. s.

Appr. Empl. Anodyn. Camphor. Sterno.

Appr. regioni cordis Empl. Lyttæ.

May 16th.—The warm plaister produced no sensible effect, and the blister was not applied. She is much the same, but occasionally the convulsive motion of the diaphragm ceases suddenly, and is followed by suspension of breathing, and total insensibility, which continues for the space of several seconds. As she recovers, the convulsive motion of the diaphragm returns, and is thus alternated during the day and night, at intervals of about half an hour. Pulse from 120 to 130. Body costive.

Repr. Mist. Cathartic.

Appr. Empl. Lyttæ regioni cordis.

May 17th.—The blister rose pretty well; but she still complains of tightness about the heart. The convulsive motions are little altered. The feet have been œdematous for several days. She has scarcely made any water. Body costive.

Repr. Mist. Cathartic.

℞. Mucil. G. Acaciæ.

Aquæ Fontanæ āā, ℥ j.

Moschi ℈ j.

M. ut fi. Haustus Capt. ½ hora somni et altm. post horas duas.

May 18th.—The bowels are opened, and she has passed urine more freely. She took half the draught, which occasioned much uneasiness in the stomach, and she was very soon afterwards afflicted with loss of sensation. Upon the

whole, she is much worse to day. The convulsive motions are more frequent, and the suspensions of breathing, longer than before. She was ordered to drink a little geneva and water, as she appeared very much exhausted, and had taken little food, except coffee and milk, and these only in a very small quantity.

R. Gum. Assafœtidæ, ℥ ij.
Mucil. G. Acaciæ, ℥ vi.
Aquæ Fontanæ, ℥ v. ss.
Spt. Æther Nitric, ℥ ss.
M. Capiat cochl ij. ampl. 4ta q. q. hora.

May 19th.—The fœtid mixture was only taken once, and made her very restless and uneasy during the night, producing a great sensation of heat in the stomach. The geneva and water agreed with her very well, and she appears to day considerably better. Pulse 96, more firm and less variable. The convulsive motion and temporary loss of sensation continue. Body costive.

Repr. Pil. Cathartic. vi. h. s. s.

May 20th.—She is not quite so well as yesterday. The bowels were freely opened by four of the pills. Pulse, 96 to 108.

May 21st.—Continues rather better. Pulse 96. She is out of order to day, which is the third time in the last six weeks. Since November, she had not been unwell before the period mentioned.

May 24th.—Complains of pain and beating in the head. The convulsive motion of the diaphragm is diminished. She is able to distinguish colours, and read with, or without the magnifying glass.

May 31st.—Complains of pain in the fore part of the head, across the eyes, and of beating in the head. The convulsive motion is better. Body costive. Pulse 108.

Repr. Pil. Hydrarg. Submur. cū. Jalap. vi. h. s. s. et Mist. Cathartic. cras mane pro re nata.

June 2d.—The convulsive motion is more violent. The bowels have been freely opened. Pulse 84. Could not distinguish colours, &c.

June 6th.—Appears to be much weaker. The suspension of breathing, with loss of sensation, comes on more frequently; she has scarcely been free from it for five minutes at a time. Body open. Pulse 84, and feeble.

Appr. Sinapismi pedibus.

June 7th.—The sinapisms were not applied. The convulsive motion, and the sonorous breathing, are much weaker. The loss of sensation takes place almost every minute. She scarcely takes any food. Pulse 96. She was desired to take a little wine, or Geneva and water. The bowels are open.

June 8th.—The Geneva and water made her sick. In other respects she continues much as yesterday.

℞. Argent. Nitrat.
Belladonnæ, āā. gr. iij.
Pulv. R. Rhei. gr. xv.
Confect. aromet. q. s. ut fiant Pil. viii. Capiat. j. 4ta quaque hora.

June 9th.—The pills, by some mistake, were divided into eighteen instead of eight. She took one of these pills yesterday, which produced violent pain

and heat in the stomach. About four hours after, Mr. Thomas visited her.—The pulse beat 58 strokes only in a minute. The pills were omitted. The loss of sensation comes on every half minute. I observed, that if, during the interval of returning sense, the mind could be interested, by keeping her attention awake, by conversation, or by answering questions, the duration of the period of sensation is lengthened. I advised her mother to give her something to do, and to endeavour to occupy her mind as much as possible. The breathing seems totally suspended when she falls backward, and the convulsive motion of the diaphragm ceases. The pulse does not cease to beat; a feather held before her mouth was not disturbed by the breath, nor was any impression left upon a looking-glass. Pulse 84 to 96. Dr. Brandreth and Mr. Shaw were present.

June 10th.—She continues much the same. When she recovers from the suspension of breathing, she sighs deeply, and says she suffers a sharp pain, as if she were struck through the heart with a pointed instrument. Cold water was sprinkled over her face and neck, and cloths wetted with water were applied to the face, without producing any sensible effect. Pulse 96.

June 12th.—Miss M'Avoy appears better. The intervals before the loss of sensation comes on, are longer than before: this is attributed to her having attempted to sew again, which engages, in a certain degree, her attention. Pulse 84.

June 14th.—Continues to improve. The intervals are now nearly half an hour in duration. She employs herself in hemming patch-work for a bed quilt. Body costive. Pulse from 108 to 112. Her powers are, in a certain degree,

returned. She can distinguish colours, read, and tell the time of the day upon a watch.

Repr. Mist. Cathartic. u. a.

June 17th.—The bowels have been opened, but not freely. Pulse 72, irregular, and slightly intermitting. She told a few colours, and the time of the day. The convulsive motion has ceased, and the loss of sensation occurs only in the night. She constantly employs herself with her needle during the day.

Repr. Mist. Cathartic.

June 19th.—Continues much better; reads and tells colours more perfectly than for some time past. Dr. Brandreth and Mr. Shaw were present: she read the maker's name in Dr. Brandreth's hat, "Capon, hat-maker, London," with her hands behind her. The eyes were covered with the black velvet and gold-beater's skin, with a silk handkerchief tied over the whole. She read several lines, which Dr. Brandreth wrote, with tolerable precision; and when she mistook a letter, it was more like what she named, than what Dr. Brandreth intended, as it was written in great haste. She told some letters upon a snuff box, which could not be read easily without a glass; and, with a magnifying glass, she read all the words but the termination of the last. She traced, with her fingers, the landscape, which consisted, amongst other objects, of two cocks fighting: she said they were like two peacocks: the tails of the cocks were very full, and we did not think her remark much out of the way. The lines at the bottom, were "Better stuff never trod a midden." She told the time of the day, and several colours. Upon taking off the handkerchief, one of the pieces of gold-beater's skin was loosened from the eye, but they appeared still to be sufficiently covered by the handkerchief.

June 21st.—Continues to gain ground every day.

June 24th.—She told colours and the time of the day. The eyes were covered, for the first time, with sticking plaister, and black silk in the center of the plaister, so as to allow the edges to adhere to the cheek and nose, and to cover the globe of the eye.

June 28th.—Was still more accurate in the description of colours, in reading with the fingers, and with the magnifying glass. Traced and told several colours of silk, inclosed in a glass bottle. The eyes were covered, as on the 24th, with a silk handkerchief over the whole, which went round the head, was crossed at the eyes, and was pinned to each side of the head, over the ears.—This mode appeared very well adapted to the purpose, because the handkerchief being drawn tight, pressed upon the sticking plaister, so as to keep it close to the eye; and, when it was taken off, the sticking plaister appeared to adhere very closely to every part where it was applied. Upon taking off the sticking plaister, the eyes were so firmly closed, that a few seconds passed over before she was able to open them.

June 30th.—I was particularly anxious that all the gentlemen who had seen her at Wavertree, and any medical men, or others, interested in an inquiry of this nature, should visit her. The pain and uneasiness she suffered at the Wavertree examination, had left an impression on her mind not to be easily eradicated: she appeared agitated when the name of any one of the gentlemen was suddenly announced to her.

Drs. Brandreth and Trail, and Mr. Bickersteth, accompanied me to-day.

There had been much thunder and lightning in the morning. Her pulse was 108 when we first entered the house, but in a short time it rose to more than 120. The hands and fingers were very cold. The eyes were covered with sticking plaister, as before. Dr. Trail did not wish any handkerchief to be made use of. Stripes of sticking plaister were also placed in different directions, but as the muscles of the face, &c. moved, little crevices were opened in different parts of the sticking plaister, which Mr. Bickersteth employed himself in closing, with the end of a pencil case. She failed in the first instance, and was soon very much agitated. Drops of perspiration rested upon her upper lip, yet she still endeavoured to feel and name the colours, until at last she became quite exhausted. She, however, did name a few colours, and told the time of the day; but Dr. Trail was not satisfied that the eyes were sufficiently covered, although, when the sticking plaister was taken off, it appeared to me that it had adhered sufficiently to answer every purpose of blindfolding her: the marks which were impressed upon the cheek, were very evident, and the eyelids were closed when the sticking plaister was taken off. As usual, when at a loss, she put her hands to her mouth and head, which excited still farther suspicion in Dr. Trail that she had some improper motive in doing so. I might observe, that I had mentioned my intention of accompanying Dr. Trail to Miss M'Avoy the day before; and I have no doubt the agitation originated from Miss M'Avoy having heard that Dr. Trail had declared she could positively see. The pain and throbbing in the head became much worse after this trial; the loss of sensation came on about seven o'clock, P. M: she was obliged to be carried to bed.

July 1st.—Mr. Cyrus Morral, a respectable merchant, Mr. Pentland, of this town, Mr. Stewart, and Mr. Kirwan, from America, who had heard of Miss

M'Avoy's extraordinary powers, requested me to introduce them. We proceeded to St. Paul's Square, and I covered the eyes with sticking plaister and black silk, in so complete a manner to all appearance, that it was agreed by the gentlemen present, it could not be more secure. A silk handkerchief was then tied over the whole, crossed at the eyes, and pinned above the ears. Several pieces of silk were given to her, all of which she named correctly. I had provided twelve square pieces of glass: between each piece I inclosed a small portion of silk. They were sealed together with sealing wax, and were given in the following order:—

1. Light Blue, ...	*answered*, ...	Light blue.
2. Straw colour, ...	,, ...	Light yellow, or straw colour.
3. Two pieces of glass, without silk, ...	,, ...	Nothing. The glasses of a greenish colour.
4. Scarlet, ...	,, ...	Scarlet.
5. Dark ruby, poppy, or mulberry, ...	,, ...	Ruby, or dark poppy.
6. Pink, with white spots on one side, and white, with pink spots, on the other, ...	,, ...	Whiteish.

She told the colour of two seals belonging to the watch of one of the gentlemen, Mr. Kirwan of Charleston; also the colour of the metal of his watch, and of the ribband attached to it, which was red, with a black border. She told the time of the day exactly to half a minute, in two different watches. I gave her a piece of paper, cut out from the covering of Ormerod's History of Cheshire, and she read with her fingers "*Ormerod's History of Cheshire, Part III.* Subscriber's copy, No. 200, collated and perfect.

"Dr. Renwick,

"Liverpool."

My address was written, and the letters which were printed were tolerably large. A copy of one of the laws of the Athenæum, printed in a very small type, was given to her. She could not read it with her fingers, although I have before seen her read fully as small print. The magnifying glass was put into her hands, and she read two or three lines very correctly. Soon after this experiment, she suddenly lost the power. I requested the gentlemen to attend to the taking off the silk handkerchief from the eyes. When it was taken off, the sticking plaister was seen adhering closely to the skin, in every part, except in the inner canthus of the left eye, where a small pin head might possibly be introduced, but where it was not likely any ray of light could pass, as the handkerchief was tied directly over it, and the light must have fallen downwards, to have reached the eye, through the middle of the handkerchief. After the sticking plaister was removed, the eye-lids appeared quite closed upon the eyes, and it was some time before she could open them. A few colours were given to her a little time after the bandage was taken off, but the power was gone, and she did not tell any of them.

July 2d.—On the 30th of June, it was proposed that another trial should be made in the presence of Dr. Brandreth and Dr. Trail. The hour appointed was half past one o'clock. Dr. Brandreth was prevented from attending, and Dr. Trail did not arrive during my stay in St. Paul's Square. Dr. Trail has since informed me he was exact to his time. There must have been some mistake in this statement, as I did not leave St. Paul's Square until half past two o'clock. Being anxious for their arrival, I walked in the square to meet them, and, when it was some time past the hour, I met Mr. M'Corquodale, who expressed a wish to see Miss M'Avoy. He followed me into the house, and I was very sorry that Dr. Trail had not been present, as I think, from the experi-

ments made on this day, he would have been induced to alter his opinion.—The method employed to blindfold her, was Burgundy pitch, spread upon calico. Two pieces, large enough to cover the eye-balls, and to lie flat upon the cheek bones, were prepared, and a piece of black silk placed in the centre, leaving a border sufficiently large to adhere to the skin. The plaisters were warmed at the kitchen fire, and applied there to the eyes by Mr. Thomas, and they adhered apparently as close as possible. The silk handkerchief was firmly bound over them. She went through the former routine of experiments. She read two address cards; told the different colours of the cards, the one of which was white, and the other of a stone colour; mentioned the time of the day; the metal of Mr. M'Corquodale's watch, and she read, through a magnifying glass, several lines in a hand bill. Several silks were put into a phial bottle, each of which she named correctly. Four locks of hair were separately placed in her hands, and she declared them accurately to be three shades of brown, and one of gray hair. From the two former trials, the skin about the eyes was inflamed by the application of the sticking plaister; and from this, the skin was excoriated; a sufficient proof that it had adhered very closely.

July 6th.—The eyes are very tender, from a slight inflammation which has occurred; but the skin, where the sticking plaister adhered, is nearly healed. She is still troubled with the suspension of breathing, and loss of sensation in the night, which comes on, it is said, almost every quarter of an hour. She gets no sleep that she is aware of.

July 8th.—She is rather better, but very easily agitated, and at first was not able to distinguish any colour; afterwards she told me the time of the day by my watch. I placed a light rose-coloured leaf between the glass and the dial

plate of my watch, and I did the same with a blue flower in Mr. Thomas's watch. The eyelids were closed by Mr. Thomas's fingers: she declared correctly the colour of the leaf in my watch to be a very light pink, with one part of it yellow, and another part white, and that in Mr. Thomas's watch to be blue.

July 11th.—She is still very much agitated upon the slightest occasion. Her father, this morning, came upon her suddenly, when his shoes had not been put on, and pressed her gently round the waist, intending to ask her how she did; but before he could do so, she fell backward, insensible, and almost threw him down. There was much thunder and lightning. She could scarcely distinguish a single colour. Pulse 122.

July 13th.—I found her very unwell. The pain of the head returned with considerable violence. She could not tell the time of the day, and I did not press her to tell the name of any colour. The eyes were not covered.

July 14th.—In consequence of the pain in the right side, and tension of the abdomen, she, of her own accord, had recourse to the mercurial friction, about a fortnight ago, which had affected her mouth. She has not found so much benefit from it as she has generally done before. The belly still remains very tense and very costive. She has no power of distinguishing colours. Her hands and fingers are excessively cold.

Repr. Mist. Cathartic.

Omitt. Frictio Hydrarg.

July 17th.—Continues much the same. The bowels are costive. Pulse 140. The suspension of breathing seizes her every evening about eight o'clock,

and continues during the night almost every half hour; but it does not come on in the day unless suddenly alarmed, and occasionally when the issue, which discharges freely, has been dressed. She is very seldom troubled with thirst. She told me a blue silk to-day, with her eyes covered with a piece of cotton wool, and a handkerchief tied over it. The wool was both above and below the handkerchief. A few minutes before she had tried a piece, consisting of several colours, and she told a lilac, a yellow, and a yellowish green, which were upon the surface satin, but she did not name the body part of the silk, which was drab.

Repr. Pil. Calom. cū. Jalap. u. a.

Repr. Mist. Cathartic. u. a.

July 20th.—The bowels are still costive: complains of a piercing pain through the heart, which occasionally seizes her, and she is then unable to support herself. On going along the lobby, she often strikes her head against the wall, if nobody is near to assist her. Complains of headach and giddiness. Yesterday she told a few colours, and read a few words to the Rev. Mr. Rutter, a Roman Catholic clergyman, but she put her hands in warm water. Her hands are now almost constantly cold.

Repr. Pil. et Mist. Cathartic. u. a.

July 22nd.—Complains very much of uneasiness about the heart, and acute pain in the head. Body very costive. Pulse 120.

R. Pil. Hydrarg. ℥ j.

Hydrarg. submur. ℥ ss.

Pulv. Rad. Jalapæ,

—— Aloes. comp. āā. ℈ ij.

Syrup. Simpli. q. s. ut fiat Massa. in Pil. xl. dividenda. Capt. ij. vel. iij. nocte maneque pro re nata ad alvum solvendam.

℞. Infus. Sennæ, C. ℥ x. ss.

Tinct. Ejusdem, ℥ i. ss.

—— Jalapæ, ℥ j

Magnes. Sulphat. ℥ ij. M. sumat coch. iv. 2da, q. q. hora, donec sit alvus bene soluta. Injice, si sit occasio, vespere, enema domesticum.

July 23d.—Mr. Thomas informs me her pulse, last night, at ten o'clock, was only 58; but the pulsations were continued during the suspension of breathing. He thought the suspension of breathing came on almost as frequently as it did upon the latter end of the last attack. The piercing pain through the heart still continues. If standing, when this comes on, she falls immediately unless there is somebody near to support her. The bowels have been opened, but there is still very considerable fulness in the right hypochondrium, and over the whole of the abdomen.

Repr. Pil. et Mist. Cathartic.

July 24th.—She is rather better to-day, although the suspension of breathing is very frequent in the night; and she is more troubled with the convulsive motion of the diaphragm. In the day it does not come on but in a trifling degree: the lancinating pain is very acute, and frequent in its attacks. Her spirits are not quite so good as they have been for a few days past.

July 25th.—Is better in her general health. Body open. Pulse 108. She told a scarlet coloured cloth upon the back of her hand, uncovered, but she could not tell any other colour given to her.

July 26th.—The suspension of breathing continues much the same in the

evening. She obtains little or no sleep. Pulse 96 to 108; rather feeble and irregular. The tongue is moist and clean, and it has scarcely ever been otherwise than natural in its appearance. Body open. Could not tell any colour when uncovered.

July 27th.—There is little alteration in her health. Pulse 108. Body open; but every thing she takes is immediately returned by vomiting.

Repr. Mist. Alkalin. ℥ viij. Capt. coch. ij. cū. j. Suc. Limon 4ta, q. q. hora.

July 28th.—Complains still of the sickness. Rejects her food immediately after eating. Had not taken the mixture. Pulse 108. Body costive.

Repr. Pil. Cathartic. h. s. et Mist. cras mane ad alvum solvendam.

Has no power of distinguishing colours.

August 1st.—Miss M'Avoy is much better. The suspension of breathing comes on in the night about every half hour. Pulse 96. The sickness is relieved. I found the Rev. Messrs. Thomas, Edward, and Vincent Glover at Miss M'Avoy's. Miss M'Avoy's powers which had been very deficient for some time past, were again elicited in the presence of these gentlemen, and, having more leisure, than I had, at the time, they prosecuted their inquiries with great perseverance from the 30th of July, to the evening of August 2d. They have favoured me with the result of their experiments, which I shall repeat in their own words. The following account is transcribed from the notes of the Rev. Thomas Glover.

" Liverpool, July 30th, 1817, Eight o'clock, P. M.—Waited on Miss M'Avoy; found her very unwell, expecting her fits to come on every minute;

was unable to distinguish any colours; declared that I was taller than my brother; perceived this when we passed her in the lobby; told me, when I passed, whether I had my hat on or not.

"July 31st, Eleven A. M.—Found Miss M'Avoy in good spirits; had passed the night in almost one continued fit.* Having completely blindfolded her, made the following experiments:—

"Experiment I.—Presented six different coloured wafers, pasted between two plates of common window glass. She first laid her fingers on the red wafer, and named it. Does it not appear like a piece of red cloth? She answered, no, I think it is a wafer. The six wafers she named as follows:—dark ruby, red, black, green, stone colour, or light drab, pea green. She pointed out unasked, the cracks, openings, and deficiencies of the wafers. She said the glass was white.

"Experiment II.—She traced the outline of a very irregular figure, formed by squeezing the portions of two wafers, one black, the other red, between two plates of glass.

"Experiment III.—The seven prismatic colours being painted on a card, in water colours, she gave them the following names:—scarlet, buff, yellow, green, light blue, dark blue, or purple lilac.

"Experiment IV.—The red and orange rays of the solar spectrum being

* The nature of these attacks has been explained above.

thrown by a prism upon her hand, she said it appeared as gold. All the colours being thrown on the back of her hand, she distinctly described the different colours on the different parts of her hand. She marked the moments when the colours became faint, and again vivid, by the occasional passage of a cloud, without being desired to do so. The prismatic colours have afforded her the greatest pleasure which she has experienced since her blindness. Never saw a prism in her life. She felt the spectrum warm. The violet rays were the least pleasant.

" Experiment V.—She perceived the coloured rings formed by pressing together two polished plates of glass. Feels them at the edge of her fingers flying before them. Feels the reflected rays much better than the transmitted: could just perceive the latter.

" Experiment VI.—The prism being put into her hand, she declared it was white glass; but on turning it, she immediately said, 'No, it is not, it is coloured, it has colours in it;' and she traced what she called stripes of colours, ribands, one coloured stripe above another. Could discover no colours on that side of the prism on which the direct rays of the light fell.

" Experiment VII.—Several attempts were made to discover colours in the dark, by presenting different coloured objects to her hands, concealed under a pillow. She always failed; every thing appeared black. On one occasion she said a green card was yellow.

" Experiment VIII.—She read a line or two in small print by feeling the letters. Read through a convex lens at the distance of 9 inches; the focal length

of the lens was 14 inches. Reads much easier through this lens than without; the letters appear larger, and as if they were printed on the glass. When a hand was interposed between the lens and the book, she immediately perceived it: a penknife was laid on the line which she was reading, and she named it.

"Experiment IX.—A concave lens was put into her hand; she tried to read at the distance of 7 or 8 inches; said all the letters are confused: she moved the lens gradually towards the paper, and observed that the letters were very small: could not read easily until the lens was laid on the paper.

"Experiment X.—When she touched a plain glass mirror, could not perceive any reflected image but that of her own fingers. I feel, she says, the picture of my own fingers.

"Experiment XI.—Distinguished by the feel, the difference between polished glass and cairngorum chrystal; between silver, steel, gold, and brass: gold and silver have the finest feel. The silver of a watch-case felt finer than the gold of the seal. She distinguished between ivory, tortoise shell, and horn; which last she called bone, but seemed to have meant horn. A pin which was supposed to be a chrystal, she pronounced to be glass; afterwards, on trial, it proved to be glass.

"August 1st, 11 o'clock A. M.—Miss M'Avoy much the same as yesterday.

"Experiment XII.—Read common print easily by touching a piece of window glass held 12 inches from the book: at a greater distance she could not read, but could read much easier when the glass was brought nearer to the book. In

like manner, and at the same distance, she discovered a sixpence, half-guinea, three-shilling-piece, &c. she mentioned which had the head, which the reverse upwards, read the dates, pointed out, on the sixpence, the position of the harp, lions, crown, &c. She observed, unasked, that one half-guinea was crooked; said it did not lie flat on the paper; that the crown was downward; that it was not a brass counter: does not think it is the shadow of the half-guinea which makes her know it to be crooked.

"Experiment XIII.—Declared by feeling on the plain glass, at the distance of three or four inches, that two substances below were a red and a white rose leaf. Being asked if it was not red and white paper or cloth; replied no, it is a rose leaf.

"Experiment XIV.—Again, she distinguished by the feel, the difference between stone and glass ear-rings, seals, brooches, &c. and pointed out one glass seal, which was supposed to be a crystal; being tried by a file, it proved to be glass. She named the colours of all the different articles. She says, stone feels more solid than glass, more firm.

"Experiment XV.—Could not discover colours by the tongue; but closing, between her lips, the red, yellow, blue, and white petals of flowers, she told each accurately.

"Experiment XVI.—She told the prismatic colours as accurately as on the preceding day, whether cast on the back, or on the palm of the hand; said she perceived something black on her hand; observed when it moved, and when it was

stationary. Being bid to move her fingers, she exclaimed, oh! it is the shadow of my own fingers—which was the fact.

" Experiment XVII.—Uncovering her eyes, we cast the most brilliant prismatic colours upon her eyes, which she received firmly, without either winking, or shewing any signs that she was aware of it. The most rapid vibrations of the same light did not produce the smallest effect; her eyes remained equally firm and motionless. When the prismatic spectrum was thrown upon her mouth and cheeks, she perceived that there were colours on her face, but could not describe them so easily, or so accurately, as when they were thrown upon her hands.

" Experiment XVIII.—She distinctly felt, through a plain glass, at the distance of four inches, the prismatic colours thrown upon a white paper.

" Experiment XIX.—With her hands upon the window, perceived two newly cut stones, of a yellow colour, lying one on the other against a wall on the other side of the street; distance about twelve yards: also, a heap of cast iron railing, piled upon each other. One of the company being dispatched to place himself on the ground, stones, rails, &c. she mentioned whenever he moved his position; perceived him jump off the railing; mentioned the colours of his dress correctly, only said that a plum-coloured coat was black; mentioned two children accidentally passing by at the time. She said, they appear very small indeed; the person who was sent, appeared about two feet high, when at the distance of twelve yards; as he came nearer, she observed, that she felt him grow bigger.—All objects appear as if painted on the glass.

" August 2d, Eleven o'clock, A. M.—Found Miss M'Avoy much agitated; was unable to distinguish colours; her agitation increased at the arrival of many visisors; her pulse rose from 96 to 120; attempted several times to distinguish different coloured clothes, but all in vain; at length became unable to stand.

" Five o'clock, P. M.—Found Miss M'Avoy quite recovered; had been in two or three fits after we left her this morning. Pulse 96. Her touch in the finest order.

" Experiment XX.—A stone ornament, in the shape of an orange, she took for a real orange, at the distance of two or three inches, feeling through the plain glass; at the distance of fifteen inches it appeared like a nut, the brightness of the colour not diminished; at thirty inches, it appeared no larger than a pea—colour still vivid—still imagines it to be an orange. When she touched it, she immediately found out her mistake.

" Experiment XXI.—An orange and an apple, (stone ornaments) being placed at different distances, she told which was the nearest—distance, five or six inches; felt them both upon the glass, but the orange appeared smaller, and therefore she thought it farther off.

" Experiment XXII.—Accurately described the features, &c. of two persons, whom she had never seen before—distance of the plain glass from the face, three or four inches.

" Experiment XXIII.—Perceived her own face in a plain glass—distance, three or four inches; at a greater distance her face appeared very small; saw

her face also reflected from a plain mirror, holding the plain glass at three or four inches distance from the mirror. When the mirror was withdrawn, said her face diminished. All objects constantly appear as a picture on the glass she touches.

" Experiment XXIV.—Perceived the sun through a plain glass ; also the reflected image of the sun from a plain mirror—was not dazzled with it—found it very pleasant.

" Experiment 25.—Several small articles were held over her head ; she perceived them all in her plain glass ; she asked doubtingly, if a three shilling piece was not a guinea ; but raising her glass, and bringing it nearer to the object, she corrected her error.

" Experiment XXVI.—With her fingers on the window, described a workman in the street—distance, ten yards ; a cart, loaded with barrels of American flour ; another, with two loaves of sugar ; a third empty ; a girl with a small child in her arms, &c. all accurately true, except that there were three loaves of sugar in the second cart.

" Experiment XXVII.—Could not distinguish by the touch the difference between pure water, and a solution of common salt in water.

" Experiment XXVIII.—Accurately described by the touch several small engravings."

August 2d.—A gentleman accompanied me to-day ; Mr. Leigh and the three

Messrs. Glover were present, and I expected Mr. Roscoe, but he was prevented by an engagement.—The Gentleman had seen her before, to whom she had named four or five colours, when her hands were under a shawl, and each colour was presented carefully by himself. Mr. Glover informs me she also read with her hand under the shawl, when this gentleman was present, the word "prospectus." Miss M'Avoy, with the gogglers on, named a few coloured silks, but with no great certainty. Her hands were very cold. Pulse 108, when we first went in; and, in a very little time, they were increased to 140.—In the afternoon, Mr. Glover informed me she was very correct in her performance, as appears from the experiments above related.

August 4th.—Continues much the same. With her hand placed behind her upon the window, opposite to the communion end of the church, she told the figures of different people passing, and sometimes named the colour of the clothes, or of any thing that might be on the head, or in the hand, or upon the shoulder, or back of the person. She told also the positions of four different workmen in the Church Yard, one by one, as they sat down; and then of the four; she stated one to be reading a paper or book; the second, to have his hands folded across his breast; the third, with his hands in his breeches pockets;* and the fourth, in some position which I do not recollect. I almost invariably kept my eyes upon Miss M'Avoy's face during this experiment, whilst Mr. Thomas reported to me their situation.

August 6th.—She continues much the same: told a few colours with the gogglers on, but very soon lost the power. Mr. Booth, Mr. Reid, and Dr. Jardine were present at the time.

---

* The hands were under an apron.

August 8th.—The sickness is rather better: the abdomen is extremely tense and hard, as well as sore to the touch.

Cont. Med.

August 10th.—She had walked out with Mr. Hughes.

August 11th.—She does not appear very much thinner, nor to be particularly fatigued by the want of sleep. Yesterday she slept about an hour after her return from walking, but felt herself worse instead of being better.

August 14th.—She is upon the whole better, but the suspension of breathing still continues. A large piece of pasteboard was made use of to-day. It was cut so as to admit the nose, and to press upon the cheek, and formed a sort of grenadier's cap, rising above the head. Cotton wool was sewed upon the edges, where it touched the nose and cheek, both inside and out. Tapes were attached to it in two or three different places, which were tied round the back of the head, and a small piece of tape closed it still more over the nose. Applied to my face, and to that of several other gentlemen, we could not see; but if it were put upon the nose of any gentleman which was more prominent, it did not fit well, and a person thus constructed, might see and describe colours. The same remark might be made upon the gogglers; but when the cross string over the nose is tied firmly, it is scarcely possible for any one to see so as to distinguish any object. At any rate, Miss M'Avoy's eyes are completely covered with it, as, by looking from above down to the nose, I could see no object. The cotton wool, silk, and cloth were given to her, but she did not distinguish any of them. Thursday was very hot and gloomy. The hands and fingers were warm, but there was a clammy moisture upon them, which appears to take away the feeling as much as when they are cold.

August 15th.—The suspension of breathing comes on very often in the night, but she appears tolerably well in the day. Yesterday, after my visit, she told colours, read, &c. very well. This morning, also, she was very correct in all the experiments which were made. A carriage was at the door, with servants in livery. With her face turned sideways from the window, and my hand between the window and the face, she named the colour of the field in the coat of arms upon the pannel of the carriage, at the distance of six feet, and the liveries of the servants, which were brown, with blue cuffs. She described correctly every colour in a shawl, the ground of which was black, with several bright colours upon the border, and she traced exactly how far the one colour extended, and where another began, as well as the different shades of each colour.

August 16th.—Several ladies accompanied me to visit Miss M'Avoy, and she did every thing almost without a single failure. One lady stood in the street, without apprising Miss M'Avoy that she was going thither. The eyes were covered with the gogglers. She was desired to feel upon the glass, and to describe the object passing. She answered accurately, that the lady's gown was white; that she had a blue spencer on, and a green umbrella in her hands. She distinguished the colour of a supposed cairngorum stone: the colour she named, but she said it was not a stone, but glass, and so it proved to be by a file.*

August 18th.—Miss M'Avoy continues better. She slept a little last night. The suspension of breathing comes on at night, but at longer intervals. She

* These stones have since been shewn at Mr. Harper's shop, in Lord Street, and they say they are cairngorum stones.

read and told colours very correctly with her fingers, and through glass. Pulse 108. The heat of the hands and fingers, by Fahrenheit's thermometer, was from 88 to 92 degrees during several of the late trials. Body costive.

Repr. Mist. Cathartic.

August 20th.—She had been tired with visitors to-day, and when I arrived, she told colours very uncertainly. She complains of the pain in the head, and throbbing over the eyes.

August 22d.—She continues much the same: told colours very exactly.

August 23d.—She was not so expert to-day, and could not name correctly the silks, &c. inclosed between the glasses. She told, however, several colours of silks and papers, both with the gogglers on, and when the gogglers were taken off, and one or two with the fingers pressed upon the eyelids. Two pieces of sticking plaister, which had been used before, were shown to the party, as one of the means used for blindfolding her: they were fixed upon the eyes, with a handkerchief tied properly over them. Mr. Richard Rathbone held his fingers on each side of the nose, so as to prevent any possibility of seeing downwards. In this situation she told one or more colours to his satisfaction. The two younger brothers of Mr. Rathbone, Mr. Adam Hodgson, and several ladies were present. She told also one or two coloured papers, with the colours on the under side. One piece of paper was purple on the under side, and on the upper it was pink. She was desired to name the upper side, and she said it was pink, but she was not observed even to touch it. She named the under side purple. The circumstance of her naming the pink colour surprised us all. The gogglers were at this time used. Might she not have felt the upper surface,

though we did not observe her to do so ?* or could she have distinguished it by the smell? She also told the time of the day by the watch, and read a few words. She named correctly a blue water colour, which covered the inside of a saucer.

August 27th.—Mrs. Hughes was delivered on the evening of the 24th of a son, which occasioned an interruption to the influx of visitors. Mrs. Hughes being very stout, and Miss M'Avoy appearing tolerably well, I was induced to request them to permit Mr. Wilson, of Casterton, in Westmoreland, his son, the vicar of Preston, and Mr. Edward Houghton, to see her to-day, as the two former were obliged to leave town early in the morning. In their present situation, I esteemed the compliance with my request a great favour. The eyes were covered with the gogglers: a white cambrick handkerchief was given by Mr. Wilson: she said it was white. Mr. E. Houghton gave her a silk handkerchief, which she named yellow and scarlet; and I gave her one, which she declared to be scarlet, yellow, and chocolate, which were correct. She mentioned the colours of silk, which were placed between five double glasses, and one which did not contain any silk, she declared to be void. She read the direction of a letter to the Rev. R. C. Wilson, Preston, Lancashire, and the post mark, Rotheram, and traced the figure 9, and named it. She read also a few words, with and without a magnifying glass, in a written abstract from an act of Parliament, which Mr. Wilson had in his possession. She told the time of the day in two different watches, but not exactly to the minute, as I have repeatedly observed her to do. When the fingers were put over the eyes, she

* I have since asked Miss M'Avoy if she felt the card previous to declaring the colour. Her answer was, she did feel it.

told nothing. The piece of pasteboard before named was fixed upon her nose. She named nothing with her fingers, or on the hand, but she told two colours placed upon her under lip. The other colours given to her were black, and so they were after the gogglers had been taken off. The hands were warm, but with a clammy moisture upon the fingers. With her hand upon the window, she told the colour of the Rev. R. C. Wilson's coat, and that he had something white in his hand; but this experiment, however it might be decisive to me, under the impression I have that she is blind, would not be so to any other person, because Miss M'Avoy was uncovered at the moment. I hinted to Mr. Wilson to go out into the street, with a rolled paper in his hand. Her face was turned sideways towards me, and I placed a sheet of paper between the window and her face. Complains of pain in the head. Pulse 108. *In diem Aug.* 23. *adfuerunt menses, postridie disparebant vespere.*

August 30th.—I appointed Mr. Smith, an ingenious artist and engraver, to meet me in St. Paul's Square, at three o'clock P. M. Before he came, a young lady in the neighbourhood, seeing me go into the house, followed, and requested that she might see the young person who was blind. Miss M'Avoy very kindly allowed the lady to come in, and as soon as the gogglers were tied over the face, a few pieces of silk were given to her: she named the colour of each separately and correctly. In giving her another piece the power was gone; but as her hand was held out sideways upon the table, she pressed occasionally upon the left arm against the edge of the table, which made me suppose this pressure had deadened the sensibility of the nerves of the arm: I therefore gave the colour into the right hand, and she immediately named it. This experiment, which had accidentally occurred, was repeated three or four times, with a similar result. She told several colours of silk, inclosed between different square pieces of glass;

the time of the day, to half a minute, in two different watches; the name of the hatmaker in Mr. Smith's hat; and read part of an advertisement which he brought with him, both with and without the magnifying glass. The young lady threw down a chimney ornament, containing several flowers that were nearly dried up; she attempted to take them up from the floor, after the gogglers were taken off from Miss M'Avoy's face. Miss M'Avoy desired her not to trouble herself. Upon being asked how she knew that any person had attempted to take them up, she immediately said she heard the lady grasp them in her hands.

September 1st.—Mr. Thompson called upon me to request I would interest myself in obtaining leave to visit Miss M'Avoy, for a lady and gentleman of Halifax, who were strangers, and were to leave town in the morning. Miss M'Avoy agreed to receive them, and three o'clock was the hour appointed.—We found Mr. Smith, the engraver, and his brother, in the house. Mr. and and Miss Ramsden, Mr. W. Ingram, Mr. Ingram, junior, Mr. Thompson and I, formed the party. The gogglers were tied over the face of Mr. Ingram, junior, who declared, he could not perceive the least ray of light. They were then tied upon Miss M'Avoy. A hat was given to her, with the name of the maker, and figures in the inside of the crown. It was lined with yellow silk. She declared the colour of the silk lining, but could not make out the name in the hat. She read a part of an advertisement upon a card; a line or two from an old newspaper, with the magnifying glass; and Miss Ramsden's name, upon an address card. She told the colours of silks separately, and between glasses; the time of the day; the colour of different seals; was doubtful of the colour of an amethyst, calling it poppy, ruby, purple, or lilac. She named, upon a varnished box, the figure of a miser, his green cap, spectacles, coat, inkhorn and pen, and his

money. I asked her if she recollected to have had the box in her hands before? She answered, no. I then told her, Mr. Gresley, of the Infirmary, had produced it once when he visited her. She then remembered he had given her this box. She lost the power for a few minutes, and then recovered it. A day or two ago, she told colours which were placed upon her feet and upon her legs, but she did not retain the power for more than one or two minutes.

Miss M'Avoy has complained of more pain in the head for a few days past; the suspension of breathing comes on almost every half hour in the night; but she is able to rise at an early hour, and, by employment, to keep off the attacks until the evening closes in. Pulse 108.

September 3d.—I this morning found Miss M'Avoy very complaining, and looking worse than I have seen her for many days. It seems, a large party visited her yesterday. The appointment was at half past two o'clock, but the party were admitted at two, before Miss M'Avoy was ready to receive them.—She hurried herself in dressing, and was very much heated when she went down into the parlour. Dr. Jardine and several other persons were present. The pasteboard and cotton were preferred by one of the gentlemen, who held his fingers over the pasteboard and nose, so that it brought on agitation, and she could not tell any colour, and she was soon obliged to retire into another room. Her hands were of a burning heat; her face was very much flushed; the pulse, at one period, was 160. It was a considerable time before she became composed. A few of the party went away, and others came in. In a short time, she told colours, read, &c. so as to satisfy those who were present. She is affected with a slight catarrh, and complains of dulness in hearing, and of

headach. It appears her hands were of so burning a heat yesterday, that she bathed them in cold water. Mr. Thomas informs me the pulse was reduced to 96, when she was more composed. Pulse 108 to 120.

September 4th.—Complains very much of pain and throbbing in the upper part of the head. The abdomen is very tense and sore to the touch, particularly about the right hypochondrium. Body costive. Pulse 120.

Repr. Frictio Hydr. nocte maneque.

Repr. Pil. Cathart. h. s. et Mist. cras mane, si sit occasio, ad alvum solvendam.

Distinguished colours, &c. very well.

September 5th.—Complains still of the pain in her head, with a throbbing sensation across the temples, and in the sockets of the eyes. I observed her to stagger with the young child in her arms, but she did not fall, as a chest of drawers supported her. Body still costive. Pulse 108.

Mr. Richard Rathbone, Mr. Barclay, their ladies, Miss Reynolds, of Coalbrook Dale, and two other young ladies, were present in the afternoon. The eyes were covered with the gogglers. She told the colour of two or three sorts of silks, light blue, dark blue, and white, which covered a small pocket book, belonging to Mrs. Barclay; of a white pocket handkerchief; of a parasol, green, white, and green and white mixture; and the colour of the pelisses of the two young ladies, which were blue and white. She named a guinea, a shilling, a sixpence, and a three shilling piece, placed upon plain glass, and feeling through another glass. She became now agitated; the feeling left her, and she was not able to tell a single colour. I desired her to go out of the room for a few minutes; upon returning, she told the time of the day in one

watch exactly, in the other, not within two or three minutes; but she afterwards corrected herself.

She told the following liquids in phials:—

Blue,	*answered*,	Blue.
Purple,	„	Purple.
Red,	„	Red.
Orange,	„	Orange.
Black,	„	Black.
Water,	„	Colourless, or water.
Spirit of wine,	„	Ditto.*
Green,	„	Green.

She could not read any thing, and was obliged to have the gogglers taken off two or three times. She told several stones correctly. Mr. Barclay tried the gogglers on, and by working the muscles of his face in different directions, he managed to tell the time of the day by a watch; but his nose was very prominent, and not at all similar to that of Miss M'Avoy; had the covering extended a little more down to the point of the nose, and been tied a little tighter, it is probable he could not have seen. I must observe, that the cotton had been so padded down, by frequent use, that there appeared an opening under the cotton, above the nostrils, and she appeared to look sideways, during the latter experiments; but, I have reason to think, this mode of appearing to look at the object, arises more from habit than from any design. Mr. Barclay was not quite satisfied

* But not the same; she said it was colder. The water had been put into the bottle some time before, and the spirit of wine had been just taken out from a large bottle at the druggist's. She had, on the 17th of January, declared the spirit of wine to be warmer. Might not this be explained by the difference of temperature, as the bottle of water had been in my waistcoat, and the spirits of wine in my coat pocket?

with respect to the covering, and it was very natural this should be the case, when he could himself see through it. She afterwards told a purple flower behind her, a light yellow, a marygold, and a small pincushion of red cloth, under a white handkerchief, lying upon her knee. She was extremely ill, during the greater part of this examination. She returned a cornelian heart, which Mr. Rathbone had left when he visited her before, and seemed to give it to him without any doubt of his person. Mr. Rathbone was low, and Mr. Barclay tall in stature. The solar spectrum was thrown upon her hands, &c. but she felt nothing; the sun which shone upon her head, seemed to affect her by its heat.

September 6th.—Miss M'Avoy complains very much of pain and throbbing in the head, and across the eyes. She has considerable cough, with a stoppage in the nose, and little expectoration. Body still costive. Pulse 120. She seems so unwell that I did not ask her even to name a colour.

R. Vin Ipecac.

— Antimon. āā. ℥ ss. Cap. guttas xx. ter de die ex aquæ pauxillo.

Repr. Mist. Cathartic.

September 8th.—Miss M'Avoy is no better. Her body is very costive.—Pulse 108. Staggers as she walks across the room. Uncovered, she could not name colours to-day with her fingers. Covered with the gogglers, she named a straw coloured silk, placed upon her under lip. In going out, Dr. Freckleton and Mr. Peacock met us, and wished to have seen Miss M'Avoy, but, being so very ill, it was thought advisable for them to defer their visit to another opportunity. Mr. Thomas observed however, that they might as well see her, as it would be an introduction, and might induce the family to receive them at a future time. They went in, tried on the gogglers, and were satisfied they could

not see with them. Miss M'Avoy was induced to put them on, and Mr. Peacock gave her his watch; she told the name of the metal, which was silver, and the time of the day. She did the same to Dr. Freckleton's, which was gold. She named the time of the day, which was a few minutes later in the one watch than in the other. She was asked to name how many fingers were upon the watch, but in attempting to do so, she found the power was gone.

℞. Infus. Sennæ. C. ℥ ix. ss.
Tinct. Sennæ — ℥ i. ss.
—— Aloes.
—— Jalapæ, āā. ℥ ss.
Magnes. Sulphat. ℥ ij.

M. Sumat. Cyathum Vinosum 2da. quaque hora donec sit alvus bene soluta.

September 9th.—Complains of pain in the head and throbbing, particularly over the eyes. The pain at the top of the head, which was violent a few days ago, is gone off; but there is a sensation of numbness left. Has taken the medicine once, but it has not operated. Pulse varying from 96 to 120; feeble, irregular, and slightly intermitting; tongue furred in a very slight degree; the suspension of breathing comes on nearly every ten minutes. She staggers occasionally in crossing the room. Mr. Brandreth and Mr. Thomas were present, and the eyes were examined very particularly. She told a few colours of flowers and silks by her hands, and when placed upon her lip; but soon lost the power.

Repr. Mist. Cathartic, u. a.

September 10th.—There is little alteration in her complaints. The bowels have not been properly opened.

Repr. Mist. et Pil. Cathartic.

September 11th.—I was induced to request the liberty for a few strangers to visit Miss M'Avoy. It was cheerfully complied with, although I had little hope of her being able to tell a single colour, as she complained, not only of beating in the head and throbbing, but of pain through the temples and across the eyes. The hands were very hot. Before the arrival of the party, she had just time enough to dress herself, as she had been *en dishabille* when I entered the parlour. She came down tolerably composed, and her hands felt much cooler. By the thermometer, the heat of the hand was 100 degrees; it stood at 70 in the shade, about an hour before at the infirmary. Mr. Wilbraham Egerton, of Tatton, Cheshire, his lady and son, Mr. Perry, Mr. Gresley, two of his friends, a gentleman and lady, and Mr. Bennett, an out pupil of the infirmary, were present. The gogglers were tried by Mr. Egerton, who was satisfied with the mode of blindfolding her. Mrs. Egerton gave her a drab coloured silk shawl, with a flowered border of different colours, white, green, red, yellow, &c. which she described with great exactitude. She told the time of the day in three different watches, which were not alike in time, and the colour of two, a gold and a silver hunting watch. Of this latter, she said it was silver on both sides, but there was no glass as in the other watch. She described the colours of silk, between four pair of glasses, sealed with red wax; and she detected the one which was empty. She read a few words of a direction of a letter, but did not make out the whole, as it was not very easy to decypher the writing. She read with the convex glass three names upon a card. She told the colour of Mr. Egerton's horses with her hand upon the window glass; that the one was a light and the other a darker brown; that a lady was seated in the curricle, and, that there was something red near her. She occasionally lost the power, but soon recovered it again, upon the gogglers being taken off, and being allowed to go into the next room to cool herself. She was desired to continue the pur-

gative medicines, and the friction of the mercurial ointment, until her mouth became sore. I recommended that no person should visit her for several days, until the pain in the head, &c. were removed.

September 12th.—In calling upon Miss M'Avoy, I found the Rev. John Yates, the Rev. Thomas Belsham, and the two Misses Yates, had been admitted. I was not prepared with any colours for the purpose of examination, but went out to procure some. Upon my return, Dr. Taylor and another gentleman, seeing the Rev. J. Yates's carriage at the door, had gone into the house. She read very uncertainly a few words, and told the time of the day in a watch. She named again the time of the day in two other watches, which were not exactly alike. I gave into her hands several pieces of silk, which she described correctly, and a few wafers of rather uncertain hues, which she did not make out well. A seal was given to her, but she could not name the colour. Upon the whole, her powers were deficient, in comparison, to what they sometimes are.

September 13th.—Dr. Brandreth, the Rev. James Hornby, Rector of Winwick, Mr. Thomas, Mr. Luke, Mr. Evans, and several other persons, were present at this examination. The heat of Miss M'Avoy's hands was about 90 degrees of Fahrenheit. She told different coloured silks very correctly; the double glasses containing silks, and one piece of cotton with red stripes, which had been given to her more than once before. She read several lines, in a correct manner, from a volume of the Rev. Mr. Murphy's sermons, which had been lately presented to her by the author, both with and without the magnifying glass. She endeavoured to read a part of a letter, which the Rev. Mr. Hornby placed in her hands; but she did not do it with that certainty I have often observed. She told to whom the face belonged of an engraved portrait,

which I am informed she had never had in her hands before, by feeling it all over with her fingers. It was the portrait of the late Rev. William Tarleton, who lost his life in consequence of a fever, which he is said to have caught during a laborious attendance upon the sick poor belonging to the Roman Catholic persuasion. Dr. Jardine came in a little before this period, and informed us that she had named him, when placed upon the rails of the church-yard, with her fingers upon the window glass*. Dr. Brandreth gave her a varnished snuff box, upon which there was the picture of an old man. She said it was an old man, but she did not make it out as well as usual. Through a plain glass she felt the features of a gentleman, the Rev. James Hornby, who had spectacles on, reflected from a common mirror, and of Mr. Thomas, whose name she mentioned. She suddenly said the power was gone. She also lost the power several times before, and she did nothing when the pasteboard, with cotton wool, was placed upon her nose in a horizontal direction from the nose. She could not tell the colour of two seals which were given to her by Dr. Brandreth, but she declared they were both stones. She told one colour, blue, behind her. The hands were moderate as to temperature, except at the latter end of the examination, when they became more heated and clammy. She told nothing with her hands placed upon the window. The eyes were covered with the gogglers.

September 15th.—Miss M'Avoy still complains of the pain in the head; the throbbing sensation over the eyes is relieved: she has been walking out to-day. Body still costive. The abdomen is less tense, but still sore when touched. Three ladies were present. The gogglers were tied over the eyes.

---

* She had never seen Dr. Jardine before her illness, when she could see.

She told the time of the day in three different watches exactly. She named the colours of different silks, and she told four with a handkerchief thrown over the head, between her hand and the silks. The last colour she told in this way she said was blue, and, in an instant after, it was black, and then, the power is gone. The colour of the silk was blue.

℞. Pil. Hydrarg. ℈ j. divide in Pilulas xx. Capiat ij. nocte maneque.

Continr. altera remedia.

September 16th.—I saw her to-day with a gentleman of the profession. She told the time of the day upon two watches; three or four silks, which I gave to her, and one silk taken from the inside of the case of the gentleman's watch; the nature of the metal, the colours of the seals, &c. and read a single line in a book. The gogglers were used, as they were in the afternoon, when I am informed Lord Stanley, the Rev. James Hornby, of Winwick, Captain Hornby, and Mr. Thomas were present. I understand they all expressed their satisfaction at the powers she exhibited. I saw Miss M'Avoy in the evening. She complained of pain in the back part of the head, and throbbing across the eyes. Body costive. Pulse 108.

Repr. Mist. et Pil. Cathartic.

September 17th.—Complains of the pain and throbbing in the head being more violent than for some days past. The pulse from 96 to 108. The body has been slightly opened. The suspension of breathing continues about every quarter of an hour in the night. Mr. and Mrs. Freme, Mrs. M'Allister, the Rev. Mr. Goodier, the Miss Dixons, the Miss Leighs, Mr. Thomas Davies, Mr. Robert Clay, and several other persons, were present. The weather being very warm, and the gogglers heating her very much, I proposed that she should try

the black velvet and gold beater's skin. It was prepared by one of the ladies, Miss Dixon, by sewing two pieces of sufficient size upon white Persian silk, which being wetted with a little water, was affixed upon the eyes very closely. The black velvet, with gold beater's skin, as before mentioned, was also wetted, and applied over the former; and, over all, a silk handkerchief was tied, until the gold beater's skin was dried so as to adhere firmly upon the eyes and surrounding parts. She named the colours of different silks, of wafers, and of seals. She was mistaken in an ornament, consisting of small green and red stones, in imitation of emeralds and rubies, which she said were not glass, but she told the colours of each accurately, except one, although irregularly intermixed. She afterwards said they were glass. She declared the colour of two amethysts to be a darker and paler lilac. The paler she said was set round with pearls, and was a real stone: the other, which was a seal, was not real, but glass. She told the colour of silks contained in a glass bottle: she named the time of the day in different watches: she read a line and a half in the Rev. Mr. Murphy's Sermons, without the glass, and four lines and a half in a small pamphlet which one of the gentlemen brought with him, with the magnifying glass. She could not tell the time of the day by feeling through the green glass, placed over the glass of the watch, nor could she name a colour, placed below the first piece of plain glass, whilst she held the second, and passed her fingers over it as usual. With a mirror upon her knee, and feeling through the plain glass, she mentioned the general appearance, reflected, of a gentleman looking into the glass with spectacles, and also noticed a watch which I placed over the mirror. Miss M'Avoy did not to-day possess the power of distinguishing persons in the street, by the application of the hand to the window. When the gold beater's skin, &c. were taken off, it was evident that the eyelids were completely closed, and that it adhered to every part surrounding the eyes.

September 18th.—Miss M'Avoy is very poorly to-day. Upon the departure of the visitors yesterday, I did hope she would not have been troubled again for some days; but after we left the house, I understand not less than twenty more persons were at different times admitted. She complains very much of pain in the head; but the pain across, and in the sockets of the eyes, is considerably relieved. The bowels are costive. Pulse 120.

℞. Magnes. Sulphat. ℥ ss.
Potass. ———
——— Tartaris āā. ℥ ij.
Sodæ Sulphat. ℥ j. M. et divide in Chartas vi. Capt. j. 2da q. q. hora donec sit alvus bene soluta.

September 20th.—Continues much the same. She had taken one dose of the saline composition, which had caused considerable uneasiness in the stomach. The bowels had been slightly opened. The tension and soreness of the abdomen is still considerable.

Repr. Pil. Cathartic. vi. h. s. et Mist. cras mane pro re nata.

Several persons came in whilst I was in the house, and Miss M'Avoy allowed the gogglers to be tied over her eyes. She told the time of the day in three different watches, and the colour of different silks. She read two or three lines in different books, one of which belonged to a young lady who was present, very correctly. I tried her with the glass over the head, but she could not distinguish any object through it.

September 21st.—Complains very much of pain in the head. Informs me she was very ill after I had seen her yesterday. The abdomen yields a little more upon pressure with the hand, but it is still sore to the touch, particularly

in the right hypochondrium. She endeavoured again to distinguish figures through the plain glass upon the top of the head, but did not succeed.

R. Hydrarg. Submur. gr. viii.
Pulv. Rad. Jalapæ, ℈ j.
Antimon. Tartariz. gr. ss.
Confect. Rosæ gal. q. s. ut ft. Massa in Pil. vi. dividenda. Capt. hora somni.
Repr. Mist. Cathartic. cras mane, si sit occasio, ad alvum solvendam.

September 23d.—Continues much the same. The gums are slightly affected with the mercurial friction and pills. The bowels are still costive. Pulse from 96 to 108. Several persons were present in the morning, to whom she named colours; told the time of the day, &c. One gentleman gave her a seal, which she said was red: upon being asked whether it was stone or glass, she hesitated for a few moments, and then said it did not appear to her to be either. It was a seal of Tessis composition. He also gave her a Labradore stone, the colour of which, in some instances, she described correctly to our view; in others, she seemed to be incorrect. She described a seal of Dr. Brandreth one day, which was variegated, and, as it lay upon her knee, a particular part appeared brownish to him, but she said it was greenish. Upon looking at it attentively afterwards, and in a particular position, it did appear of a greenish hue. Mr. and Mrs. Earle, Mr. Wm. Earle, and the young ladies of the family, the Rev. John Yates, Mr. Adam Hodgson, and many other gentlemen and ladies were present in the afternoon. The eyes were covered with two pieces of gold beater's skin; the one sewed upon crape, and the other upon black silk; she read, told colours, the time of the day, the colours of seals, &c. with considerable correctness, and apparently to the satisfaction of the party. She felt the hair of two or three

gentlemen, but did not name the colour correctly. The party appeared satisfied that the covering was sufficient for the purpose of blindfolding her.

September 24th.—Continues much the same with respect to her general health. She did not seem very capable of distinguishing colours to-day. The body has been very slightly opened by the purgatives. Pulse from 96 to 108.

Repr. Pil. Hyd. Submur. cū. Jalap. et Antim. Tartariz. vi. h. s. s.

Repr. cras mane Infus. Sennæ pro re nata.

Eight o'clock, P. M.—Mr. Thomas called upon me to say there had been a large party at Miss M'Avoy's in the afternoon, and that Miss M'Avoy had been thrown into a very unpleasant state by the intrusion of a gentleman, who, upon Mr. Thomas placing upon the eyes the first covering above described, went down upon his knees and looking up to Miss M'Avoy, declared, before it was sufficiently dried, that the eye-lids were open, and that she could see. This observation, it seems, led to others, which were unpleasant to Miss M'Avoy and to the party, and she was thrown into that state of confusion which might be naturally expected from such a charge. If the gentleman had wished to defeat the expectations of the party, he could not have taken a more effectual method, as every thing which agitates her, immediately destroys the power. I have since seen Mr. Nairn, a respectable surgeon, in Union-street, who was present on the same day, and he assures me, that in the presence of the Rev. James Barr and Mr. M'Culloch, junior, with her eyes covered with the gold beater's skin, Miss M'Avoy told the time of the day in a watch, one or more colours, and satisfied them completely, she was blindfolded, so as to prevent her from seeing, if she even possessed the power of vision.

September 25th.—Dr. Brandreth, the Rev. James Hornby, Captain Hornby, of the Navy, the Honourable Edward Stanley, and a party from Knowsley, visited Miss M'Avoy. Mr. Thomas and I were present. The eyes were covered with gold beater's skin, sewed slightly upon a little crape, sufficiently large to cover the eyeball, and to press down the eyelids. After it had remained for some time, it was allowed by the persons present that the eyelids were properly closed. Another piece of gold beater's skin was sewed upon a larger piece of black silk, wetted by a small sponge, dipped in water, and applied over the first piece. In a little time also, this application appeared to adhere firmly over the eyes, and to rest upon the upper part of the cheek. Several pieces of silk were given to her; she named the colour of each correctly. The colours of the pieces of silk, inclosed between two glasses, and sealed with red wax, were declared. She told the colour of several liquids contained in phial bottles. I have seen her more correct than in this experiment, as she said two bottles contained colours different from what they really were. She pointed out the various colours of silks contained in a small phial bottle. She traced the lines, and declared the figures printed on a piece of calico, which had, a little before, been brought in from one of the shops, and she told also, generally, the different colours of the print. She named the time of the day, in different watches, exactly; the colour of seals; and she read some lines both with and without the magnifying glass. She told a guinea, a shilling, and a sixpence, placed upon one glass, through another plain glass; but an eighteen penny piece, she could describe only as larger than a shilling. If I mistake not, she said afterwards "bank token was marked upon it," the reverse side being uppermost. She described through the plain glass, the persons of two gentlemen, reflected from a mirror. She thought one of the gentlemen was Mr. Hornby, whose reflected image she had described before in a similar manner. Captain Hornby, who had put on his

brother's spectacles, is said to bear a strong resemblance to him. Mr. James Hornby wears powder; but she said the gentleman whom she perceived, had dark hair. Captain Hornby then took off the spectacles, and applied an eye glass to one eye. She declared that a hand was raised up to his face, and then, that he had a glass in his hand. She could not read with a concave glass at a short distance; but when it was placed upon the book, she read two or three words. She lost the power occasionally, and went into the back room. Dr. Brandreth, Captain Hornby, and I, followed her. With her hands upon her back, she could not name the colour of one or two pieces which were put into her hands; but she told correctly three colours, with one hand placed rather sideways than behind her. She was still covered with the gold beater's skin.—Mr. James Hornby was requested to take off the covering, and he, as well as the rest of the party, had no doubt of her being perfectly blindfolded, and that she could not have seen, even if her eyes had been perfect.

September 26th.—Complains still of pain in the head; but in other respects, she seems rather better. Her body has been slightly opened. Pulse 96 to 108, irregular and slightly intermitting. She could not name any colour to day. She was not covered.

September 27th.—The two Miss Alansons, of Wavertree, and another young lady, called upon me to request I would obtain permission for them to see Miss M'Avoy. I appointed half after two o'clock to meet them in St. Paul's Square, as I had little doubt of obtaining the necessary permission. Miss M'Avoy was covered with the gogglers. She told the colours of several silks; and of the silks contained between the glasses. As a party from Knowsley was expected, I thought it better to defer the trial of any more experiments until their arrival.

It happened, however, that they did not come, and I proceeded to fix the gold beater's skin upon the eyes. The pieces with crape and gold beater's skin were first applied after closing the eyelids; and afterwards the black silk and gold beater's skin. They were allowed a sufficient time to dry and adhere to the skin. She told the time of the day in a watch, exactly to a minute. She named two pieces of money placed upon a glass, feeling through another piece of glass. She told the reflected appearance of one of the ladies, from a mirror, through a plain glass, with great correctness; and, when the lady had put on her face a pair of spectacles, and looked into the glass, Miss M'Avoy immediately observed the lady had put on the spectacles. She read several lines both with and without glasses, in two different books. The coverings were now taken off, which had adhered firmly to the skin; the eyelids appeared to be perfectly closed, and it was some time before she could open them, from their being, as it were, glued together. She complains still of the pain in the head, and occasional throbbing across the eyes; the abdomen is more easily compressible. The bowels are slightly acted upon by the purgatives. Pulse 108.

September 29th.—I was requested to meet Dr. Mackenzie, of the medical staff, this morning, about the usual time of my visiting Miss M'Avoy. I found him, accompanied by three ladies. Mr. Thomas, and Mr. Joseph Brandreth, were also present. Miss M'Avoy seemed very much better in her general health; the gums were affected by the mercurial friction and pills; she still however, complains of pain in the head and throbbing across the temples, but not in so great a degree as before. Pulse 108 to 120.

She went through the different trials to the entire satisfaction of the parties who were present. The gold beater's skin was used; the first piece was sewn

upon muslin ; and after this was applied and allowed to be sufficiently dried, another piece of gold beater's skin, which had been sewed upon black velvet, was wetted and applied over the first piece. It adhered to the upper part of the cheek bone. When these were taken off Dr. Mackenzie and Mr. Brandreth declared their conviction of Miss M'Avoy being blindfolded effectually. I requested Mr. Brandreth again to try the effects of the belladonna, rubbed with a camel hair pencil upon the upper eyelid. The strong solution which had been made use of before, for a similar experiment, was now used. The pupils did not appear to be more dilated, or, at least, in no material degree, after it had remained on the upper eyelid for a considerable time ; and, it seemed to be their joint opinion, that Miss M'Avoy was blind, and the blindness was occasioned by the defect of the optic nerve.

In the morning Mr. Brooke of the Custom-house called upon me, to request I would obtain permission for Mr Leicester, one of the Welsh Judges, Mr. Goodbank, and himself, to visit Miss M'Avoy. The hour appointed was half past two in the afternoon. I met Mr. Davenport, an old friend, who carries on an extensive pottery and glass manufactory in Staffordshire, as I was going to St. Paul's Square, and requested him to accompany me. When we arrived, we found the gentlemen above named already there, and Dr. Jardine also made one of the party. The eyes were, after a little time, covered with the gold beater's skin, sewed upon muslin, and applied as before. After having been allowed to remain for a few minutes, that they might be completely dried, the second application of gold beater's skin and black velvet was made over the former covering. The gentlemen allowed that the mode of blindfolding was complete. Three or four silks were given to her, which she named correctly. Three silk handkerchiefs were separately given to her. The first

was yellow and red, with another dark colour, which she said was yellow, red, and brown; but I am not certain whether the colour was black, or a dark green or brown. The second was red, yellow, and chocolate; the third was red and white, which were correctly named. She told a straw colour inclosed between two glasses. Three watches were given to her: she told the time of the day in all of them correctly, except in Mr. Leicester's watch, when she named the time of the day as fifteen minutes past three; but her finger was upon the second hand at the moment, which pointed at fifteen minutes past three. Upon being told she had mistaken the finger, she found out where the other pointed, and stated the time correctly. In this watch, also, the hour, minute, and second hands were steel, which is not very common in watches. Upon being asked of what metal they were composed, she answered steel. She named the colour of the metal of the watch: she read several lines, both with and without the magnifying glass: she named the colour of two or three seals, and of three or four liquids contained in phials. She appeared to distinguish, three different times, spirits of wine from water.* The gentlemen then attended to the taking off the coverings, and from the mode in which the lower covering appeared to adhere, and to press upon the eyelids, which appeared through the muslin to be entirely closed, independent of the other covering of black velvet and gold beater's skin, not the slightest doubt existed in their minds of the truth of the statement they had heard and seen.

September 30th.—Miss M'Avoy is certainly better in her general health

---

* There was a little difference in the size of the bottles, but she did not appear to judge from the form of the bottles, as the bottle was held about the middle, and was never examined as to the length.

since the mercury has excited its proper action upon the system. She still, however, complains of pain in the head, and her body is generally obdurate, if not almost constantly acted upon by purgatives. Pulse 108. The skin more moderate in its temperature than usual.

Cont. Remedia.

Mr. Bootle Wilbraham, and a part of his family from Lathom, Mr. and Mrs. Pilkington of Bolton, Mr. and Mrs. Gaskell, Mr. Lyall, Drs. Brandreth and Jardine, Mr. Willis Earle and daughter, Miss Lutyens, Mr. Willis Earle, jun, Mr. Thomas Hodgson, Mr. Martin, Mr. Josiah Williamson, Mr. French, and several other gentlemen and ladies, were present. Miss M'Avoy was covered exactly as yesterday, with the gold beater's skin, muslin, and velvet. The mode of blindfolding her was examined with minute attention, and every person appeared satisfied that the coverings were sufficient for the purpose. A few silks were given to her, which she named correctly. She then told the colours upon a piece of variegated marble; but she did not name them quite correctly. She declared the red, the whitish, but not any other colour correctly. A very dark green colour she said was brown or black. She told the time of the day in three or four watches to half a minute, and she affected a sort of indignant pleasantry at Dr. Brandreth having attempted to deceive her, by putting white paper over the dial plate of his watch, which she immediately detected. She read several lines in two books, both with and without the magnifying glass, generally with correctness, and also in a printed paper given her by Mr. Josiah Williamson. She told through a plain glass a guinea, two separate shillings of the new coinage, with their superficial bearings, and two plain shillings of the old coinage. In the one she observed that it was crooked, and in the other that there was a dark line, which originated from the upper part of the head not

being entirely defaced. Another guinea, which was placed upon the left side of the others, she did not observe. She told the reflected image of a gentleman's (Mr. Lyall) coat and hat: she described his eyes to be shut, and then to be opened again, and that he had brown hair. A lady's image was placed in a situation to be reflected, but I presume it could not be so, as Miss M'Avoy only described the riband of her hat, without mentioning the chip bonnet she wore, which was so conspicuous that it could not have been placed so as to come in contact with her fingers. She told the colour of two rings which were given to her, and set with different stones. She named correctly three or four wafers, which Mr. Wilbraham gave me to present her. Upon my placing my hand before her, a little below her mouth, she very soon found there was some obstruction to her breathing.

Mrs. Gaskell presented to her a book, when Miss M'Avoy had retired, being oppressed with heat, as there was a great number of persons in the room, which Miss M'Avoy named, when covered with the gogglers, to be of a reddish hue. She declared the same of this book when placed in such a situation as to be reflected from the mirror. After these experiments, Drs. Brandreth, Jardine, and I examined the eyes. The left pupil appeared at least six times more dilated than the right, which has not been usually the case, and it was almost of a pentagonal form. Could the belladonna applied yesterday have produced this effect? There seemed to be no contractile power in the pupil of either eye.*

---

* October 1st.—Mr. Martin called upon me twice to-day. I had the pleasure of seeing him in the afternoon. He informs me he did not wish to give his opinion at large in the room, but he now told me he was not satisfied Miss M'Avoy was blindfolded, and that a friend had applied the gold beater's skin in a similar way upon his own eyes, and could see. I agree with Mr. Martin, that any man may force

October 1st.—Mr. Hughes had advertised his intention of admitting no parties to visit his step-daughter in future, as his family affairs, the comfort of his wife and of himself, independent of the danger accruing to Miss M'Avoy from these every-day examinations, of injuring her health, were at stake. It was understood, however, that it might be possible to gain entrance to day, as permission had been granted to a few friends of Mr. Thomas to visit Miss M'Avoy. The room was almost inundated with ladies and gentlemen. Amongst a few of the persons present, I observed Mr. Wolsely, who introduced me to his friend the Rev. Dr. Mason, of New York, Mrs. Wolsely, Mr. and Mrs. Samuel Hope, Dr. Freckleton, Mr. Peacock, Mr. J. Myers and his sisters, Mr. J. Baines, Mr. J. Smith, and several other individuals whom I did not know. The late mode of covering the eyes with gold beater's skin was adopted. The velvet made use of was thinner than that which had been used before, being silk velvet. This, however, was of little consequence, as the first covering had before been placed over the eyelids when closed down.

Several colours of silks, liquids, and papers, were given to her, which she told

---

open the eyelids, by a strong exertion of their muscles; but if there be the same scrutinizing examination upon his friend's covering as that upon Miss M'Avoy, I dare assert that the motion of the eyelid would have been seen by an observer; but I believe no person ever saw the eyelids of Miss M'Avoy raised after the gold beater's skin had properly adhered. Mr. Martin has proposed a machine for preventing Miss M'Avoy from seeing the object, yet giving the power of smell and breathing. Although my opinion respecting Miss M'Avoy's blindness is not at all influenced by Mr. Martin's scepticism, I shall still be happy to assist him in any project of this kind, which may convince him, or may still further satisfy the public mind. Mr. Martin had, however, expressed himself satisfied, upon being asked the question in the room, whether he thought Miss M'Avoy was blindfolded by the gold beater's skin.

generally correctly. A bottle of water, and one of spirits of wine, of equal weight, were placed one after the other in her hand; but I am not certain whether she named them correctly in the first instance, as I was not sufficiently guarded to see which was the water and which the spirits of wine, before I placed them in her hand. She told the colour of the paper which covered them at the top, as I had received them this morning from Mr. Robert Clay, in Ranelagh-street. I afterwards gave one into each hand, and she declared which phial contained the water, and which the spirits of wine. Upon examining them, I found she was correct in her statement. Different watches were given to her, and she named the time of the day exactly, the colour of the metal, and the hands. Dr. Mason altered the time of the day in his watch, and it was placed in a line with her eyes, and she told the time of the day, but was not able to tell the colour of the hands. She did not name a colour under a hat, which Dr. Mason gave her, nor did she tell the colour of the lining. She named the colours tolerably correctly in two or three shawls; but she once asked if a green shawl was black; and, in describing the shade of the green, she said it was a bottle green, but it was a much lighter green. The reflected image of Dr. Freckleton, from a mirror, she named through a plain glass, as a gentleman of pleasing face and light hair. A pair of spectacles were put upon his face, which she detected, and she told when they were taken off. She named the colour of the Claude Lorraine glasses incorrectly. Miss M'Avoy read a word here and there, but not in the correct manner I have observed her to do. When the gold beater's skin was taken off, Dr. Mason, Dr. Freckleton, and other persons expressed themselves, as if they thought it must have blindfolded her. The skin of the cheek had been drawn out as it was taken off, and the eyelids appeared perfectly closed. A large party remained in the back room after I left the house, and she went through a variety of experiments much more correctly than before.

She told the bottles with spirits of wine and with water, correctly, two or three times. She declared the face of a gentleman, reflected through the plain glass, from the mirror, to be the same gentleman whom she had named before.

Dr. Freckleton mentioned the circumstance of Miss M'Avoy taking a pair of scissars from her mother, when offered to her, as if she could see; and he also said, that in going to take some papers from the chimney piece, he was afraid she would have thrown down two bottles he had placed there, and of which she was not aware, if he had not prevented her. Upon the whole, Miss M'Avoy did not succeed so well as she does in general, which I think was owing partly to persons crowding too much around her, but principally to a letter received by Mr. Hughes, her stepfather, which, being unfortunately read to her before this meeting took place, had considerably distressed her, as it did not simply imply a doubt, but an absolute certainty of imposition.

Mr. Hughes has sent me a copy of his letter to this gentleman, which I presume occasioned this answer. As I am perfectly unacquainted with the gentleman, and was not present on the day when the circumstance occurred, I have inserted the two letters in the appendix, that the persons who were present may judge how far the gentleman's statements are correct.

Since this narrative went to the press, several parties have visited Miss M'Avoy, and have declared their conviction of her being blindfolded, and of being able to distinguish colours, read, tell the time of the day, &c. Amongst the number who have seen her are, the Bishop of Chester, the Vicar of Bolton, Lord Lilford, Mr. Ireland Blackburne, and Mr. Blundell, of Ince.

The Reverend Jonathan Brooks, Mr. Thomas Cropper, Mr. John Cropper, Mr. Thomas Corrie, Mr. Shuttleworth, Mr. W. Ingram, and a very large party of ladies, visited Miss M'Avoy on the 13th of October. Miss M'Avoy's eyes, particularly the left, were so sore, that the gold beater's skin upon black velvet, with a piece of plain silk placed in the centre, was only applied to each eye. The covering was not as satisfactory as I could have wished, nor do I think it would convince any of the party that Miss M'Avoy was blindfolded; of course, all the experiments made on this day would be nugatory. Some of the party thought the gogglers more effectual, and she readily assented to have them tied on. She appeared, however, not to be able to tell a single colour, having been very much exhausted during the first trials.

REMARKS

UPON

MISS M'AVOY'S CASE.

THERE are few cases upon record, which have been attended with symptoms of so violent a nature as the one above related, in which death has not been the consequence. On the fourth day after the convulsions came on, the extreme state of exhaustion to which Miss M'Avoy was reduced, indicated a speedy and fatal termination, and we had little hope of seeing her alive at the period of our next visit. The discharge which took place was undoubtedly the cause of her life being prolonged. If our patient had died, it is probable we might have ascertained the mode by which this fluid was discharged, and from whence it came. The certainty of her being alive, however, is of more importance than the means by which she was saved; and I am satisfied in endeavouring only to account for them by conjecture. I think it possible, from the history I received of the disease upon the 5th of June, 1816, that compression of the brain actually existed at that period, and that convulsions, and even blindness, might

reasonably be expected to follow. The disappearance of the œdema from the lower extremities; the scarcely perceptible fluctuation in the abdomen; the increase of pain, and throbbing in the head; and the giddiness which ensued, led me to suppose that fluid was collected somewhere between the membranes, or in the ventricles of the brain. Is it probable, that the disappearance of the œdema from the extremities, could have caused any sudden translation of serous fluid to the brain? This question brings to my remembrance cases, related by authors, of the sudden disappearance of œdema having produced collections of fluid in the ventricles, and between the membranes of the brain. I more particularly recollect an instance of this kind which occurred in my own practice a few years ago, and which I shall relate:—A poor woman, living in a cellar, sent for me about a fortnight after her confinement. She was afflicted with that leucophlegmatic swelling of one of the lower extremities, which the late Mr. White, of Manchester, so ably described. The usual remedies had been prescribed with some benefit; but on the fourth day after I visited her, the floor of the cellar being formed of bricks, was on that morning washed, and this unfortunate woman having occasion to get out of bed, by some means walked across the floor without shoes or stockings, and then returned to bed. She was seized with convulsions; her features were horridly distorted, and death ensued on the following day. The leucophlegmatic swelling almost entirely disappeared previous to the attack of convulsions; and, I have little doubt, had the head been opened, and the brain examined, that fluid to a considerable amount would have been found in the ventricles, or between the meninges.

In the history of cases where convulsions have terminated in death, and the body has been subjected to dissection, it has generally been found that compression of the brain existed, and owed its origin to causes tending to impede its

action. Our knowledge of the brain, even with the improved mode of dissecting it, which we owe to the accurate and scientific anatomists Drs. Gall and Spurzheim, is still very confined; and from the pulpy, and almost inseparable nature of its component parts, it will probably be at a very distant æra before its anatomy is clearly ascertained. It is, however, generally allowed, that the brain, from which the nerves are propagated to the organs of the senses, and to the extreme parts of the body, giving sensation, and becoming agents of the will, is of great importance in the animal economy; but it is dependent also for the perpetual renewal and support of its functions upon the blood. Whatever causes an interruption to, or an increased action, in this circulation, so as to influence the general system of the body, may ultimately affect the brain. If, by any sudden emotion, or passion of the mind, or from the effects of disease, the blood be propelled with too great violence to the brain, the intellect will be disordered, and the ideas will succeed each other with irregularity, or too great rapidity.— When obstruction takes place in the return of the blood through the extremities of the vessels of the brain, the function of the brain is suddenly suppressed, and the body is deprived of all voluntary exertion, although the vital motion may remain, for a time, unimpaired: but, if this obstruction be not relieved by the removal of its cause, the spark of life will at last become extinct. So intimate is the connexion between the circulation of the blood and the nervous system, that if the one fails, the other becomes paralysed or dies: for instance, if the large artery of a limb be compressed or tied firmly with a ligature, the function of the nerve will be ultimately destroyed, because the circulation of the blood through the nerve being obstructed, it loses its powers. On the other hand, if the nerve be cut through, or tied, the power of voluntary motion is lost, and the animal can no longer move the limb. Therefore, whatever affects the healthy action of the brain, or prevents the due circulation of the blood through it, will be pro-

ductive of disease. In this way, blood, poured out by the rupture of a blood vessel in the brain, or in its membranes; tumours; collections of pus after inflammation; fractures of the cranium; effusion of serous fluid between the cranium and dura mater; between the dura and pia mater, or the convolutions of the latter, or fluid collected in the ventricles, will cause compression of the brain. I ask again, therefore, is it not probable, that compression of the brain might have taken place in this case, from the sudden absorption of a larger quantity of serous fluid into the circulation than it could bear; and might it not be necessary that this superfluity should be somewhere deposited to prevent the extinction of life? If we consider the mode in which the circulation is carried on in the extreme vessels, the effusion of serous fluid between the meninges, or into the ventricles of the brain, by any sudden impletion of this kind, may be accounted for.

In all the cavities of the animal body it is necessary, for the due performance of their functions, that they should be moistened by a serous fluid, or vapour, which is produced from the secreting extremities of the arteries, and is taken up by the minute mouths of the returning vessels, so that it should be incessantly renewed, but never accumulated beyond a certain degree. Of course, if any cause should occur to interrupt this mutual action existing between these two vascular systems, so that the one should be unusually distended by an excessive quantity of fluid, a rupture of the vessels must either take place, or a quantity of serous fluid be effused, to relieve this oppressive bulk, into the cavities of the brain, or between its meninges, where it will remain, unless the absorbent vessels have the power of taking it up, and returning it into the circulation.

In this case, the pain in the fore and back part of the head was chiefly

complained of. The throbbing and beating sensation seemed to be very deeply seated, and it was more than once observed, that a generally tumified appearance had taken place in the scalp of the occiput, nearly where the lambdoidal suture joins the parietal bones to the occipital. This appearance, after the discharge had taken place, went away, and recurred more than once again upon the return of the convulsions, and was more particularly evident previous to the attack which took place in December, 1816.

There are cases upon record, which admit of large quantities of fluid being collected between the cranium and dura mater, as well as between the other membranes of the brain; but the quantity which has been collected in the ventricles of the brain, has sometimes been so enormous as to detach the bones from each other, at their connection, by suture, and to enlarge the volume of the brain to an extent that seems enormous. Examples of this kind will be found in the Sepulchretum Anatomicum Boneti, and in Morgagni de Sedibus et Causis Morborum. In many cases of hydrocephalus, the quantity of fluid found, upon dissection, in the ventricles, is by no means considerable. It has been surmised, that the fluid was collected in some tumour at the back of the nose, or in the gullet; but I do not think it possible that a tumour could have existed in that situation, containing any moderate quantity of fluid, without being perceived by its effects upon the speech, or breathing, or in swallowing.

The more probable mode of accounting for it, is certainly that which is stated above, of a collection of fluid in the ventricles, or between the meninges of the brain. Dr. Bostock's experiments prove that the fluid was similar to that effused from serous cavities, and, in its nature, a true dropsical fluid, but he does not think it was similar to that contained in the ventricles of the brain, in

hydrocephalus, because it contained a larger quantity of animal matter; but at the same time, its solid contents were less than those of the serum of the blood. He presumes, however, that it was mixed with the mucous fluid, which is occasionally expelled from the lungs and fauces, in its passage through the nose or mouth. It is not of material importance whether the fluid was contained in the ventricles, or between the meninges of the brain, as compression would equally be produced in the one case as in the other.

That the fluid was discharged in large quantities after the first attack of convulsions, which took place in June, can hardly be doubted, when it is considered that, on the fourth day after it commenced, no less a quantity than seven ounces were expelled at only two efforts, which succeeded each other almost as quickly as the efforts of expiration and inspiration. The quantity discharged appears to have been so great, that had it not found an exit, it must have been retained between the meninges, or in the ventricles, and most probably would have caused the death of the patient.

The acrimony of the fluid, during its accumulation and detention, may have opened a passage for itself from the cranium, and it seems probable, from the mode in which it was discharged, that it may have made its way through that part of the ethmoid bone which is contiguous to the back of the nose. If this were the case, it is also probable that the small quantity of fluid, which escaped in two of the following attacks of convulsions, might have passed off from the same orifice, and through the nose, as well as in the last, where it escaped much in the same way as during the first discharge, and in a considerable quantity. Of this, however, only a very inconsiderable part was obtained, resembling the white of an egg in colour, consistence, and general appearance. In confirmation

of the probability of a passage for the fluid having been formed in this way, I will quote an extract from Morgagni, giving an account of the dissection of a sheep which had been afflicted with water in the head.

" This sheep avoided herding with the flock, and every day, by intervals, rolled himself upon the earth, nor would suffer his head to be touched, but avoided it by all possible endeavours. Valsalva observing this, and being desirous to know the origin of the pain, purchased and dissected the sheep :* nor did he find any thing morbid elsewhere than in the brain ; for when he first took it out from the cranium, a little acidulated water fell from that part where the mamillary process approached to the os ethmoides. But a greater quantity of water was effused when it was pulled away from the pituitary gland. Then, in dissecting the brain, when he came to the lateral ventricles, a follicle appeared therein, containing a good quantity of water, being made of a membrane which seemed to be a production of the pia mater, except that some very small corpuscles were scattered through it, resembling the medullary substance of the brain. The roots of the follicle came out from the bottom of the right ventricle, and wheresoever they were, below this ventricle, there the substance of the brain, both in its medullary and cortical part, was corrupted all round to a considerable extent. In short, the whole brain was extremely flaccid; nevertheless, the disposition of the nerves was as usual. The examination being carried on, that part of the os ethmoides which lies under the mamillary processes was found to be so much eroded by the continual dripping of water from the brain, as to afford a free passage from the cranium to the nostrils."—*L.* 1, *Art.* 6.

---

* Morgagni does not say whether Valsalva killed this sheep, although it seems to be implied. Might not a discharge have taken place, as in Miss M'Avoy's case, and the sheep have been relieved, if it had been allowed to live ?

Whether the convulsive motion of the diaphragm, and the suspension of breathing which followed it, and which still comes on at intervals in the night, are to be attributed to the state of the brain, or to visceral obstruction, I can hardly determine. From the pain and throbbing of the head, and the deep seated pain which is often felt in the sockets of the eyes, we have reason to fear that diseased action still exists in the brain. Miss M'Avoy, in giving an account of her feelings, describes the staggering as being more dependent upon the darting pain which she occasionally feels, as if struck through the heart with a sharp instrument.

The peculiar powers which she appears to possess of distinguishing colours, reading, &c. with her fingers, are of so extraordinary a nature, as, with our present information, to preclude all reasoning upon the subject. This faculty has certainly, however, originated from a morbid affection of the nervous system, which having deprived her of sight, has occasioned this singular faculty to be brought into action. The *modus operandi* will not be easily elucidated, nor will individuals who have not seen her, believe that she can exercise these powers without seeing.

Until the middle of October, no doubt was entertained of Miss M'Avoy being entirely blind. I had, early in September, observed the dilatation of the pupil to be somewhat diminished from what it had been when I visited her in August. Mr. Thomas, who was present at the time, obtained a candle, and we applied it as suddenly and closely to each pupil as possible, without observing either of them to contract or to dilate. A number of the experiments I have made are detailed in the narrative, which, in ordinary cases, would be sufficient to satisfy the most sceptical that the organ of vision was destroyed. The

irregular dilatation and contraction which was observed in October, however, induced Mr. James Dawson, and other gentlemen of the profession, to presume Miss M'Avoy could see. But this is not a conclusive reason, because many instances have occurred of blindness, where the contraction and dilatation of the pupil has been much more perfect than in this case.

Indeed, I once imagined, when looking at the eye through a magnifying glass, at a time too when the sun fell strongly upon it, that I observed something like filaments extending across the pupil. She can gaze upon the sun without affecting the eyes in the least degree; and the solar spectrum thrown upon the eyes, however suddenly, did not seem to make the least impression.

Had the fact of blindness been unanimously agreed upon, I would have endeavoured to have given an explanation of some of the phenomena detailed above; but until it be ascertained in a manner that shall be satisfactory to the public, it would be absurd to attempt it.

My colleague, Mr. Brandreth, who ranks very high as a consulting surgeon and oculist, has favoured me with his opinion upon the subject, which I shall quote in his own words.

"*College Lane, Sunday Morning.*

"My dear Sir,

"In compliance with your request, I have repeatedly examined Miss M'Avoy's eyes with all the attention so important a case requires. It is the firm conviction of my mind that she is really blind.—With respect to the iris, I have no doubt that, at some period or other, it has

been much inflamed, and that adhesion of some of the fibres with each other has been the consequence. I judge this to be the case, from the seemingly capricious manner, if I may so speak, in which it contracts and dilates, although in neither case, to any great extent. I have more than once used a strong solution of belladonna to the eye and surrounding parts, without producing any sensible dilatation. The first time I used belladonna, it seemed to enlarge the pupil of the right eye to a certain extent, but by no means in a similar way to what occurs in a healthy state of the iris. I have sometimes seen it more relaxed in a bright light than in a weak one. I have thrown the light of a candle on the centre of the cornea, through a powerful double convex lens, without its contracting in the slightest degree.

" I am,

" Dear Sir,

" Your's truly,

" J. Brandreth."

This case, in a medical point of view, is curious, and if her blindness be allowed, the extraordinary powers above related may lead to conclusions of considerable importance in the philosophical world. My only motives for publishing them are to give a plain unvarnished statement of facts, and to satisfy the public mind, which has been roused into extreme curiosity, that no efforts have been wanting on my part to elucidate the fact of her blindness; or that she could, when blindfolded, distinguish colours, read, &c. &c.

I have heard many assertions made by individuals, tending to prove that Miss M'Avoy read words, when her fingers had never touched the letters; that she could go about the business of the house, and find any thing better than any

of the family. The first of these assertions I think must have been made by those persons whose minds have been biassed against her, as, in all the experiments I have made, she always passed her fingers over the letters before she read them, and she has often read them when the letters were covered with one hand. As to the latter assertion, I can give my own evidence that she is very expert; but even in these instances, circumstances have occurred which have given corroborative proof of her blindness; at any rate, I am merely the historian of her case, not the advocate of imposture; and if any evidence can be advanced that she can see, which is better than what I have produced of her blindness, I shall not hesitate to retract an opinion, which has not been founded upon slight grounds, nor without the due consideration the subject demands.

These questions were put to Miss M'Avoy, which she answered in the following manner:—

Ques.—Did you ever knit a stocking before you was deprived of sight?

Ans.—Yes.

Ques.—When your mother gave you the knitting, did you find it difficult to execute?

Ans.—I found it very difficult at first, and did not know well how to begin; but I soon learnt it, and felt gratified that I had succeeded.

Ques.—Were you more expert in sewing?

Ans.—I experienced much the same feeling as in knitting.

Ques.—What sensation did you feel when you first were asked and told the colour of my coat?

Ans.—At first it was a sensation of astonishment, and then of pleasure.

Ques.—Do you prefer any colour?

Ans.—I prefer the brighter colours, as they give a pleasurable feeling; a sort of glow to my fingers, and indeed all through me.—Black gives me rather a shuddering feel.

Ques.—Is the feeling similar when they are inclosed in a phial bottle, or when you feel through the plain glass?

Ans.—Yes: it is similar; but not exactly so, if the bottle be cold.

Ques.—Do you feel the colour equally well if two glasses are placed before the object?

Ans.—If the glasses are very close to each other, as if there was only one glass, I feel the colour, but it appears more faint; but if they are placed at a distance from each other, I do not feel the object.

Ques.—If coloured glasses are given to you, what sensation do you feel?

Ans.—Much the same as when silks are put into my hand.

Ques.—How do you tell glass from stones?

Ans.—The stones feel harder and more solid, and the glass softer.

Ques.—Did you not lately feel a seal which you declared was neither stone nor glass?

Ans.—Yes: I did say so, and it felt softer than glass.

Ques.—In what way was the impression made upon the fingers, when you felt the figures reflected from the mirror through the plain glass?

Ans.—I feel the figures as an image upon each finger.

Ques.—How do figures, or letters, feel through the glass?

Ans.—As if they were raised up to the finger.

Ques.—How do they feel through the magnifying glass?

Ans.—In a similar way, but larger.

Ques.—How do they feel through the short sighted, or concave glass, similar to that which Captain Hornby gave you?

Ans.—The object is smaller in proportion, as it is held at a distance; but placed upon the paper, the letters feel the same as through common glass.

Ques.—What is the feeling you have of different metals?

Ans.—I feel gold and silver to be more pleasant than brass, copper, or steel.

Ques.—What is the feeling you have of different coloured fluids?

Ans.—Similar to my feeling of silks.

Ques.—How do you know the difference between water and spirits of wine?

Ans.—By the spirits of wine feeling warmer than water.

Ques.—How do you know that a person is putting out his hand, or when they nod to you?

Ans.—If any one puts out his hand upon entering, or going out of the room, I feel as if air, or wind, was wafted towards me, and I put out mine. If a nod is made pretty near to my face, a similar

sensation is felt; but if a finger be pointed at me, or a hand held before me in a very gentle manner, I do not feel it, unless I am about to read or tell colours, and then I very soon tell if there be any obstruction between the mouth, the nostrils, and the object.

Ques.—How do you calculate the height of persons entering the room?

Ans.—By a feeling, as if less or more wind was wafted towards me, according to the height of the person.

Ques.—Can you distinguish persons who have visited you since your blindness, or whom you have known before?

Ans.—Generally speaking, I can by the tread of the foot; but almost certainly by the voice, and sometimes by the breathing.

Ques.—If a person passes you quickly, do you feel any additional sensation?

Ans.—Yes, I feel a greater sense of heat, according to the quickness with which a person passes me, or comes into the room.

Ques.—Is your sense of feeling as strong upon any other part of the body as in the fingers, upon the hand, or upon the cheek?

Ans.—Upon the foot, elbow, and leg, and upon the lip; but it is not so sensible upon the foot, or leg, or elbow, as it is upon the lip; nor upon the lip, hand, or cheek, as in the fingers.

Ques.—Is your sense of hearing more acute than before your illness?

Ans.—Much more acute.

Ques.—Is your sense of smell increased also?

Ans.—It is very much increased.

Ques.—Can you distinguish colours by smelling them?

Ans.—No.

Ques.—Is your taste also more acute?

Ans.—Very much more acute.

Ques.—Have you preference to any particular sort of food?

Ans.—I prefer those which are sweetest.

Ques.—Do you prefer any particular kind of meat?

Ans.—Yes: I prefer lamb to any other sort of meat; but I never was fond of it before my illness.

APPENDIX.

APPENDIX.

THE following letters from Mr. Latham, Mr. Jones, Mr. Hughes, and Mr. Sandars, I have thought it necessary to insert, as all of them, except that of Mr. Hughes, are meant as evidence of Miss M'Avoy's imposition upon the public. The letters of Mr. Latham have been confirmed, by similar suppositions on the part of two of the ladies, who are in habits of intimacy with, and of one lady who is sister-in-law to, Mrs. Latham. They mentioned however, that Miss M'Avoy had told some things behind her back; and, upon the transaction being alluded to, where the confusion occurred at the tea table, they told me, that after Miss M'Avoy had poured out the coffee regularly, when uncovered, to each person, taking up the cups one after the other, and laying them down again, after they had been emptied, Miss M'Avoy began again to pour the coffee into the first cup, upon which Mr. Latham requested that she would allow a handkerchief to be tied over the eyes, to which she readily consented. She took the coffee pot into her hand, and was going to take up the second cup, but she found it was removed, and in her agitation at finding they were playing a trick upon her, she spilt a little of the coffee, and was not able to pour out any more.

The public must judge of these letters, as their opinion will be of more importance than mine. I may observe also, that Mr. Latham's first letter was in consequence of a personal application for a detail of the experiments he had made. The second letter was in answer to one I had written to request

he would give me a more particular account of them. I wrote to him again requesting that he would send it to me, and if he had forgotten the experiments he had tried, I would send him a list of queries which I had made out from an inquiry from another quarter, and which would be a mean of bringing the circumstances to his recollection. I received no answer to this letter, but a few days afterwards Mr. Latham called upon me, and stated that he recollected nothing more than he had mentioned in his letters. I then requested that his apprentice, Mr. Jones, would state what had occurred from his recollection.

My dear Sir,

Agreeably to promise, I write you some particulars respecting Miss M'Avoy during the three days she was at my house, in the month of October, 1816, likewise a few circumstances which attracted my attention prior to that time, having called on her a few times in St. Paul's Square, and which in part gave rise to my being wishful she should come out to Wavertree, where I should have an opportunity of more fully satisfying myself in such an extraordinary matter.

A few weeks before Miss M'Avoy came out to my house, I called on her in St. Paul's Square, owing to an impression that had been made on my mind, from the assertion of many respectable persons, that she could discern colours and read by the touch, although stone blind. I called on her at least three or four times, and she occasionally read a word or two, likewise told me the colours of some pieces of glass which they had in the house, with an handkerchief, or what they termed gogglers, placed over the eyes. I came, in company of several ladies, with Miss M'Avoy from Liverpool to Wavertree. She appeared to have as much advantage of light as any of us; and if any in company pointed a finger at her, she would do the same; and although she never had been in my house before, she would go about it or the garden without any difficulty. She frequently assisted us at dinner table, the same at tea, would sew or thread the needle just as well as any other person; but when taken into a room which I had made in total darkness, she never could make any thing out, either in reading, discerning colours, or threading her needle; and although she had been assisting us at tea only the minute before, in the light room, when completely blindfolded, in

attempting to assist at the same, she would upset all before her. From these, and many other proofs during her stay at my house, I am firmly of opinion that, far from her being deprived of sight, I believe her to be more than commonly acute, and that those means that I made use of prior to her coming to Wavertree, (in attempting to blindfold her) were not effectually done.

I am,

Dear Sir,

Your's sincerely,

J. LATHAM.

Wavertree, 11th July, 1817.

(A true copy. J. GRINDROD.)

Wavertree, Monday Evening.

My dear Sir,

In haste I write to you, in reply to the note I have this moment received from you. I should be happy in communicating any further particulars respecting Miss M'Avoy, but do not at present recollect any worth notice. Should I or Mr. Jones, who is from home at present, recollect any further experiments that were had recourse to during Miss M'Avoy's stay at my house, you may depend upon being made acquainted with them.

I am,

Your's sincerely,

J. LATHAM.

(A true copy. J. GRINDROD.)

Sir,

Having been favoured with a perusal of your last communication to Mr. Latham, in which you seemed desirous that I should express, in writing, the result of the few experiments which I made with Miss M'Avoy whilst here; with pleasure I concede to your

request. Some time ago, when at Wavertree, you proposed my writing out a detail of the trials; but not having taken notes at the time, I acknowledged myself as being unable to recall to memory the minutiæ of all the examinations which I conducted, so as to give a correct and satisfactory exposition. However, as you wish my account of the case which you are about to publish, in compliance with your wishes I insert the particulars of *two* which I made, and pledge my honour as to their correctness. It being a current report that Miss M'Avoy was able to read and describe different colours solely by the agency of touch, (to satisfy my own mind) I went to a neighbouring field, and collected a few leaves and some flowers of a different hue. Leave being obtained, I took the flowers, concealed in my hand, and approached the chair where she sat, with her hands fixed upon her back, the colours of which she unerringly described. Another trial was with a cross-barred white and laylock handkerchief, which I presented to her in the same manner. Not being able to describe it with that quickness that characterises her usual descrimination, she appeared embarrassed, and expressed a wish that sufficient time might be allowed. That, of course, was granted. I then took a chair, and sat facing her. After turning the handkerchief repeatedly, (perhaps for the lapse of ten minutes) she suddenly exclaimed, "I can't find it out;" threw it on my knee, and turning her eyes down, which before were fixed upwards, and not covered by any bandage, she darted a look at the handkerchief, took it quickly from me, and placing it behind her, exclaimed, "I have been too hasty." It was then, and not before, that the colour of the handkerchief was defined. Mr. L. having one morning, whilst prosecuting his experiments, borrowed a book from me called "The History of England," wherein was a frontispiece, representing King John signing Magna Charta, the figures in which were variously coloured, I was given to understand by him they were correctly described. Having occasion to refer to some part in the book, I went up stairs the same day, and enquired of a young lady, who was alone with Miss M'Avoy in the room, whether she knew where the book had been placed? She replied in the negative. Miss M'Avoy immediately got up, and went directly to the spot where it had been placed by Mr. L. without her knowledge, and singled out the very identical book, that had been placed between four others, on the chimney piece. I feel fully convinced that she had received no previous intimation respecting the situation where the book lay, as Mr. L. declared that he made no mention of it to any one.

This I record, not as a trial, but as a circumstance that I was an eye witness to, and which afforded me a sufficient proof, and has ever since impressed upon my mind, that she was guided to the place, *not* by the sense of touch, but by *vision*.

I have now, Sir, written all the facts that came under my own observation, uninfluenced by motives any other than the declaration of truth; and if what I have related is at all interesting, they are very much at your service.

With respect, I remain,

Sir,

Your very obedt. Servant,

O. JONES.

September 4th, 1817.

(A true copy. J. GRINDROD.)

Dear Sir,

The unbecoming conduct of Mr. Sandars to Mrs. Hughes and Margaret, without application or permission to enter my house, induced me to write him a note, a copy of which I annex, and am,

Dear Sir,

Very respectfully,

Your obedt. Servant,

JAS. HUGHES.

St. Paul's Square, 2d October, 1817.

Sir,

From the eminence of your situation in the commercial world, I should have looked upon you incapable of an act unbecoming the meanest character. Your intruding yourself into my house, and your unmanly insolence to my wife, meets my marked disapprobation; and, I am sorry your conduct on that day has changed the high opinion I had of you.

JAMES HUGHES.

St. Paul's Square, 26th September, 1817.

(A true copy. J. GRINDROD.)

Liverpool, September 30th, 1817.

Sir,

I have received your letter of the 26th, and regret that you should feel cause to change the favourable opinion which you are pleased to express you once entertained of my character. But, Sir, you are misinformed, I did not intrude myself into your house; I obtained permission from your wife the morning of the day I entered it. As to the charge of insolence, there you are wrong also. Of course, you could not be present, therefore I refer you to Dr. Jardine and Mr. Turmeau, to whom I have shewn your letter, and who have expressed themselves in a manner very satisfactory to me ; and at the same time very kind and considerate towards yourself. They will testify that your wife behaved in a very noisy and improper manner. I was aware that the exposure I had made, placed her in rather an unenviable situation. I believe I had compassion enough scarcely even to open my lips to her. Mr. Turmeau thinks I never did. The Rev. John Yates and his family were present ; and I refer you to them also. To Miss M'Avoy I behaved as gently as possible on account of her evidently weak state of health.* Perhaps, however, the exclamation " She can see," which was made on the impulse of sudden conviction, might be stated as an exception. I repeat my decided opinion, that your daughter-in-law can see, and that too with her eyes, aye, and as well or better than I can. I would be the first person to publish a contrary belief, if I had seen any thing whatever to bring me to such a conclusion.

There is but one way for you all to get out of the difficulty of your situation; acknowledge that her sight is restored to *her eyes*, and say as much about her previous blindness as you like. To this alternative you must come at last, and then the public will enjoy the gratifying spectacle of a patient saving the physician.

Not having, as far as I can recollect, the pleasure of knowing you, I beg to subscribe myself, as is customary,

Your obedient servant,

To Mr. Hughes.

Jos. SANDARS.

(A true copy. J. GRINDROD.)

---

* As Dr. Jardine, Mr. Turmeau, and the Rev. John Yates and family, are referred to in this letter, the truth of the above statement may be easily confirmed or contradicted. From the observation which, I presume, alludes to me, I feel no inclination either to confirm or reject any statement of Mr. Sandars.

Mr. Egerton Smith has expressed a wish that the Memoranda respecting Miss M'Avoy, published in the Liverpool Mercury of the 5th ultimo, should be inserted with the other letters in the Appendix, lest it should be supposed that he believed in the powers ascribed to her. It gives me pleasure to comply with Mr. E. Smith's request. I have no wish to gain a single proselyte to my opinion, unless he be convinced of the fact; but I can scarcely avoid thinking, that the proof Mr. E. Smith has given of Miss M'Avoy's powers, in his own presence, and, at the time, to the apparent conviction of his own mind, will have more weight with the public, than the bare assertion of his disbelief of them, founded upon the opinion of other individuals.

MEMORANDA.

Some time in September, 1816, I accompanied Dr. Renwick, on a professional visit he paid to Miss M'Avoy, at her residence in St. Paul's Square, on the east side. She was then between sixteen and seventeen years of age; of pleasing and ingenuous countenance, and apparently of amiable and artless disposition. Her mother informed me, that in the preceding June, her daughter had been attacked with hydrocephalus, or water in the head, together with a paralytic affection on one side, and a complication of other disorders which I forbear to enumerate; because I am wholly ignorant of that part of the subject, which will no doubt be minutely detailed in the publication alluded to. According to her own statement, corroborated by that of her mother, the hydrocephalus preceded, and, in their opinions, produced the blindness or gutta serena, under which she is supposed to labour, but which has been called in question, I understand, by some of the professional men who have visited her.

Her mother, however, declared that the light of the sun produced not the slightest sensible effect upon her eyes; and some of the professional gentlemen who happened to be present at one of my repeated visits, declared that though some slight contraction of the pupil was perceptible upon the approach of a lighted candle to the eye, it was by no means such as uniformly occurs when the visual organs perform the regular functions.

At my first interview, I learned from herself, what I had indeed previously been told by others, that she had recently acquired the faculty of distinguishing, not only the colours of cloth and stained

glass, but that she could actually decypher the forms of words of a printed book; and, indeed, could read, if the phrase may be permitted, with tolerable facility. To put these pretensions to the test, she permitted a shawl to be passed across the eyes in double folds, in such a way that all present were convinced that they could not, under similar circumstances, discern day from night. In this state, a book was placed before her, and opened indiscriminately; when, to our extreme surprise, she began to trace the words with her finger, and to repeat them correctly. She appeared to recognize a short monosyllable by the simple contact of one finger; but in ascertaining a long word, she placed the forefinger of her left hand on the beginning, whilst with that of her right hand, she proceeded from the other extremity of the word; and when the two fingers, by having traversed over all the letters, came in contact with each other, she invariably and precisely ascertained the word. By my watch I found that she read about thirty words in half a minute; and it very naturally occurred to us, that if, notwithstanding her supposed blindness and the double bandage over her eyes, she could still see, she would have read much more rapidly, if her motive had been to excite our astonishment. And here it may not be amiss to state, that there does not appear to be any adequate motive for practising a delusion upon the public. Her situation in life is respectable; and her mother disavows any intention of ever exhibiting her daughter as a means of pecuniary remuneration. Fifteen months have now elapsed since the period at which she laid claim to the extraordinary faculty which has given rise to so much curiosity, astonishment, and perplexity; during which time the reputation of so wonderful a circumstance has subjected her to the fatigue and inconvenience of daily and almost hourly visits.

Accordingly to *her own statement*, her powers of touch vary very materially with circumstances. When her hands are cold, she declares that the faculty is altogether lost; and that it is exhausted, also, by long and unremitted efforts; that she considers the hours of from ten until twelve, of each alternate day, the most favourable for her performance. Her pulse during the experiments, has varied from 110 to 130 degrees.

One circumstance, which has created much doubt and suspicion, must not be concealed; which is, that if any substance, for instance, a book or a shawl, be interposed between her face and the object she is investigating, she is much embarrassed, and frequently entirely baffled. She explains this by saying, that it is necessary there should be an uninterrupted communication

between her fingers and her breath. I leave it to others to draw their own conclusions upon this point; as my object is not to establish any theory, or give currency to any mystery, but to relate the simple facts. I am, therefore, compelled to express my conviction that she can neither ascertain colours, nor the words of a book, in total darkness; and, as many persons very naturally will ask, why has not such a test been proposed? the reply must be, that as the young lady is not the subject of a public exhibition, and as an introduction to her is merely a matter of favour, it might not be very courteous or delicate, under such circumstances, to make any proposal which seemed to imply a suspicion that she was an impostor.

There are persons, however, who, giving her implicit credit for the reality of the extraordinary powers to which she lays claim, will contend that it is altogether unfair to propose the test of total darkness. Proceeding upon their belief that she actually ascertains colour, &c. by the finger, or that the visual organ is transferred to the touch; still they say that light is essentially necessary to produce that effect upon the surface of the body felt, which enables her to distinguish one shade from another: they add, that as there is no such thing as colour in total darkness, it is perfectly ridiculous to expect that she should ascertain the various shades without the presence of that light which alone produces those shades. It is, according to their mode of considering the subject, as absurd as to expect an effect without a cause.

It has already been stated, that, with the double bandage over her eyes, she read several lines of a book indiscriminately opened; as it was possible that the letters of a printed book might leave some slight impression sensible to an exquisite touch, I took from my pocket book an engraved French assignat, which was hot-pressed and smooth as glass: she read the smallest lines contained in this, with the same facility as the printed book. A letter received by that day's post was produced, the direction and post mark of which she immediately and correctly decyphered.

She also named the colour of the separate parts of the dresses of the persons in company, as well as various shades of stained glass which were purposely brought.

What I had seen at my first interview was so extremely astonishing, and so far surpassed any thing I had ever known or read of the powers ascribed to persons deprived of sight, that I could

only account for it on the supposition that she was not blind, and that she had some secret mode of discerning an object notwithstanding the bandage, through which I myself could not distinguish night from day when it was applied to my own eyes. I therefore made the best apology I could for visiting her house again the same evening, having previously prepared myself with several tests, which I begged permission to submit to her examination, when the candle was withdrawn. Not the slightest objection was offered to my proposal, and the candle was extinguished: her mother stationed herself before the fire, which was extremely low, and afforded so little light that I could not have read one word of moderate sized print, if it had been brought almost in contact with the bars of the grate. I then took from my pocket a small book, the type of which was very little larger than that of an ordinary newspaper; observing at the time, that I was afraid the print was too minute; to which she replied, that her fingers were in excellent order, and that she had no doubt but she should be able to make it out. The candle, as was before observed, had been extinguished; and her mother and myself were so stationed that had there been any light afforded by the fire, we must have completely intercepted it. Miss M'Avoy sat in the furthest part of the room, with her back towards the grate, in such a situation that I could barely discern even the leaves of the book which lay open before her; the title of which she proceeded to read with complete success, with the exception of one very minute word.

I then presented to her a small piece of smooth writing paper, which was ruled with horizontal faint blue lines, between each of which were traced lines with a pen and black ink: there were also perpendicular red lines, between which were scored black lines. All these, with their direction and order, she determined without any apparent difficulty. She also told correctly the colour of a variety of pieces of cloth, procured immediately before at a draper's shop.

All the experiments hitherto described, as well as those which follow, were performed by Miss M. with the bandage before her eyes; and as the shawl, which was usually applied to this purpose, produced considerable warmth and inconvenience, a pair of what, in the opticians shops, are called gogglers, had been provided, which so completely excluded the light, that no person who tried them could discern the difference between day and night, when they were fitted to the face. As these gogglers have been generally used when Miss M. has exhibited her surprising talent, it is necessary that the reader should have a correct idea of them. They are intended to be worn by travellers, to

guard the eyes against the wind or the dust, and consist of two glasses, sometimes green, fitted into a bandage of leather, which is passed horizontally across the face, and is tied with ribbons round the back of the head. The gogglers provided for Miss M. instead of glasses, were fitted up with opaque pasteboard, lined with paper, and not an aperture was left through which a single ray of light could penetrate.

Mr. Nichol, a scientific gentleman, who was delivering a course of philosophical lectures in Liverpool, having heard of this extraordinary property, applied to me to obtain an introduction to Miss M'Avoy, and I accompanied him to her house, along with Mr. James Smith, printer, of this town. At this interview the experiments I have already detailed were repeated with complete success, whilst the gogglers were applied. One part of the performance was so truly astonishing, that I should almost hesitate to relate it, if those two gentlemen had not been present to vouch for the truth. I had furnished myself with a set of stained landscape glasses, usually termed Claude Lorrain glasses. They were seven in number, contained in a frame. She ascertained the precise shade of each correctly: one glass, however, appeared to embarrass her, and after considerable scrutiny, she said it was not black, nor dark-blue, nor dark-brown; but she thought it was a very very deep crimson. We did not know whether her conjecture was correct or not, as we could not ourselves ascertain the shade. By reflected light it appeared to us to be perfectly black; nor was the flame of the fire, which was stirred for the occasion, visible through it in the faintest degree. We had abandoned all expectation of determining this point, when the sun suddenly emerged from behind the clouds; and by that test, and that alone, were we enabled to discover that she was correct, as we could just discern the solar image of a very deep crimson. It has been said, and with some plausibility, that this must have been a bold guess upon her part: if not, it will puzzle our physiologists to explain, how a person reputed to be blind, with an opaque bandage also over her eyes, could declare the colour of a glass, which persons in full enjoyment of their eyesight, and without any such obstacles, could not discern by any other light than that of the meridian sun!

At this meeting we were informed that Miss M'Avoy had recently found out that this extraordinary faculty was not confined to her fingers, and that she could also distinguish the colour of an object which was brought into contact with the back of her hands. This was immediately made the subject of experiment by Mr. Nichol, who successively applied several objects which he had

with him to that part of the hand; in placing which, he used so much precaution, that I could not see them myself, although my eyes were fixed upon his hands. She was completely successful also upon this occasion.

I have now given a faithful narrative of what I have actually witnessed, and what has been the subject of notoriety and astonishment probably to thousands in this town; and I shall only trespass further upon the public patience, whilst I briefly state what has been related to me by several professional gentlemen of the town, as the result of their experiments, since the time when I discontinued my visits, for a reason which candour obliges me not to conceal, although I am loath to say any thing which might wound the sensibility of an individual who has afforded me such amusement, and uniformly received me with the utmost affability and politeness. I have never believed it possible that all the experiments I have witnessed were performed by the simple medium of touch; and though I admit with our master poet, that "*there are more things 'twixt heaven and earth than our philosophy dreams of*," yet I could never divest myself of the impression that the eye was in some way or other concerned in these mysteries. It was a delicate point, as I before observed, to scrutinize too closely into all the minutiæ of a performance which was gratuitous, and politely conceded to a stranger in her own house, and which, however it can be explained, is abundantly wonderful. As I could not, however, like some of my friends, become a proselyte to these miracles, I did not think proper any longer to harrass her with an impertinent and a hopeless curiosity. She had begun to assume powers of a more extraordinary character than any I have described, and by proving too much, she defeated her own object, at least in my imperfect estimation.

I had seen her seven or eight times in the course of a very few weeks, previous to my declining my visits; but still continued to hear of her, from those whose faith had survived mine, and is as lively to the full at this moment as it was fifteen months ago. From these, her truly faithful followers, I heard that the experiments I have detailed, and many others had been repeated, with the boiled whites of eggs fixed upon the eyes; and, also, that gold beater's skin had been used for the same purpose. She had also begun to tell the hour and minute through the watch glass, without opening the case! But the most wonderful thing of all, and which forms an appropriate climax to the other mysteries, was the newly acquired power of ascertaining objects at a distance, with her back towards them; and by simply stretching out the fingers in the direction of such objects! I

have heard it gravely asserted, and corroborated by herself in an interview on Monday last, that she has thus from her parlour window identified several persons passing through St. Paul's church yard, and declared the colour of their dress, &c. !!!

In the preceding protracted, but faithful narrative, it has been my object to detail facts rather than to indulge in theories.

Whatever contrariety of opinions may prevail on this point amongst true believers or sceptics, there are two conclusions, to one of which they cannot withhold their assent :—

First, Either Miss M'Avoy, although blind, possesses the faculty of distinguishing objects and colours *by the touch*, or some other means than the eyes ;—or,

Secondly, Miss M'Avoy, reputed to be blind, and with a bandage over her eyes, through which no other person can see ; in a place, also, so dark that others can distinguish little or nothing, can see *better* than any other person.

Leaving to physiologists the further investigation of this extraordinary case, I shall, for the present, conclude, by affixing to the preceding statements my name at full length, which I conceive to be indispensable in the present instance.

(Signed) EGERTON SMITH.

Liverpool, September 2, 1817.

F I N I S.

Printed by SMITH *and* GALWAY, *Liverpool.*

UNIVERSITY OF CALIFORNIA LIBRARY
Los Angeles
This book is DUE on the last date stamped below.

DISCHARGE-URL

MAY 4 1981

315

3 1158 00670 5965

D 000 712 033 0